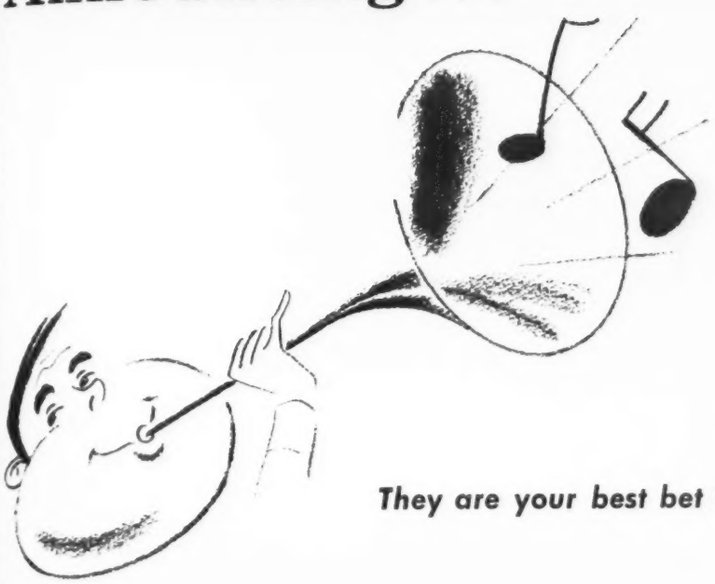
NOVEMBER 1954

PRINTING EQUIPMENT Engineer

Announcing . . .



This issue of PRINTING EQUIPMENT *Engineer* is being read by 15,000 printing plant management executives.

They are your best bet when "ADVERTISING FOR SALES IN 1955"

PLEASE ROUTE THIS COPY TO

Manager	Pressroom Foreman
Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.

For filing, please return to

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Star Selecto-Matic Quadder

Features that work for you!

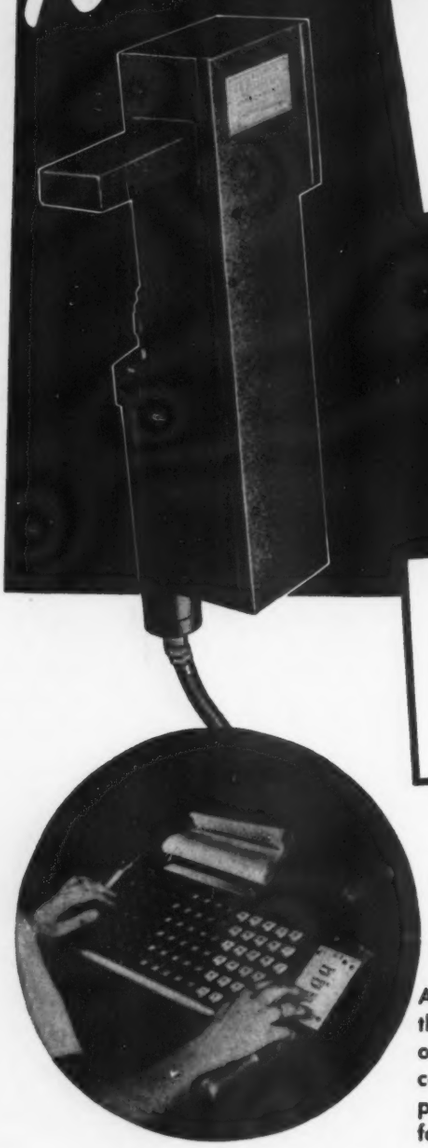
OPERATES WITH TELETYPESETTER WHEN REQUIRED

ELECTRICAL SIMPLICITY means trouble-free operation

PROVEN HYDRAULIC ACTUATION

CONVENIENTLY LOCATED PUSH-BUTTON CONTROLS

AUTOMATIC QUADDING OF SHORT LINES



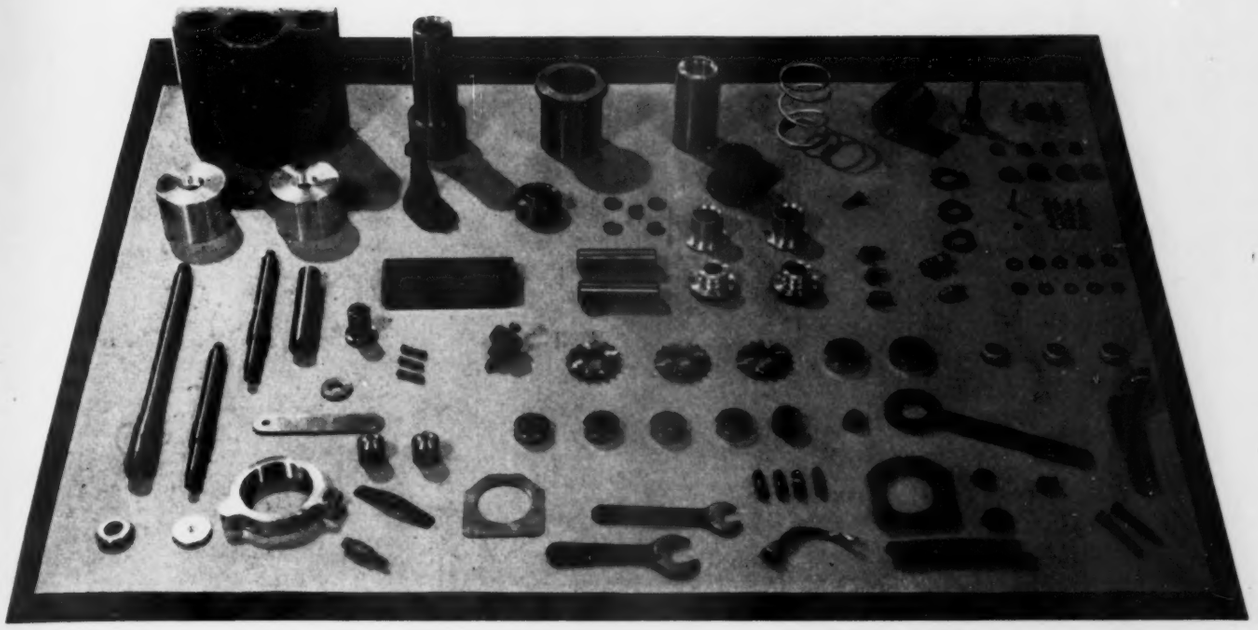
Added to these features, is the fact that the STAR SELECTRO-MATIC QUADDER on your Linotype or Intertype provides continuous operation—no waiting for the previous line to clear casting position before changing the quadding selector. It will synchronize with the Mohr Saw, and has the original and perfected Electro-Pump Stop Safety. Your investment in this fine production tool will pay dividends in *more* composition at *less* cost. Write now for folder containing all the details.

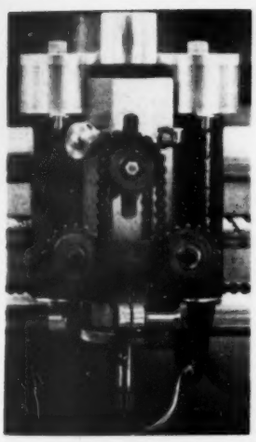
Precision TRADE ★ MARK Parts

BRANCH: 1327 BROADWAY, KANSAS CITY, MO.
AGENCIES: CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Foreign Countries

LINOTYPE PARTS
Company, inc.
SOUTH HACKENSACK, N. J.

All these parts go into the "heart" of the Sta-Hi Master Router...





The "heart" of this precision built curved router is its "head"—the Sta-Hi designed head that speeds a cutting bit at more than 13,000 r.p.m. for fast, accurate tooling of newspaper color plates.

The 133 parts pictured above, finely machined to close tolerances, are typical of the quality construction of the entire machine.

Satisfied users of the Master Router, and they number in the hundreds, testify that such craftsmanship in manufacture "pays off"—in cleaner, sharper color printing and a saving in production time and expense.

The Sta-Hi Master Router is a self-contained "router room", completely **enclosed** for safe, clean, quiet operation . . . And it has these exclusive features:

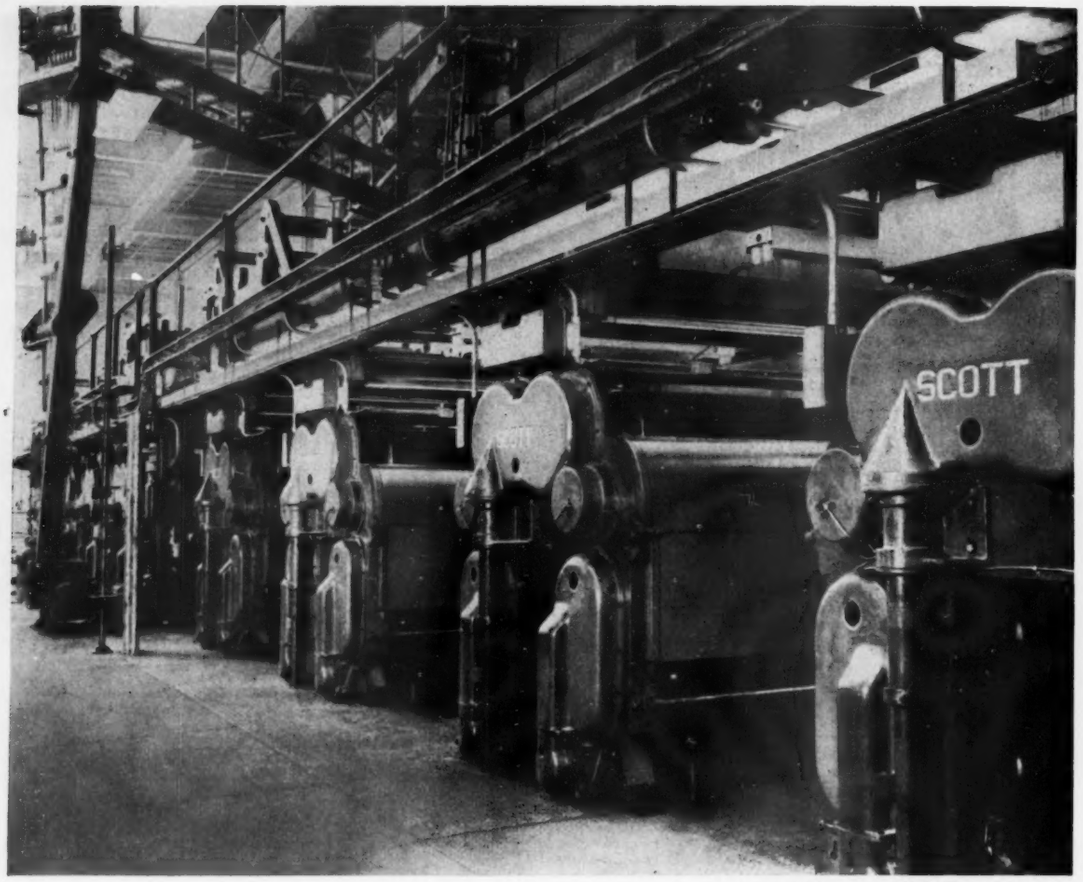
Power Driven Traverse Feed for rapid, effortless "stripping" . . . **Double Page Matcher** for machining the edges of two single plates for a perfectly "blended" double truck . . . **Air Jet Chip Remover** to keep the plate free from clogging metal particles . . . (In place of the Matcher, the machine can be furnished with a **Dual Cylinder** to route plates of two different sizes.)

If you are running color, or plan to do so soon, you need the **very best** in routing equipment! A lot of discerning newspaper production executives tell us the Sta-Hi Master Router merits that distinction. . . . May we tell you more?

STA-HI

...your best buy

STA-HI CORPORATION, BOX 152, WHITTIER, CALIFORNIA



A Typical SCOTT Installation

Why **SCOTT** *newspaper equipment sets the* **Standards of Performance**

THE world-famous performance of Scott Newspaper Equipment originates at the design boards, and continues through every stage of manufacture. The resulting over-all superiority of Scott units comes from constant, painstaking attention to every detail involved in these four, broad considerations of design and manufacture:

1. Capability of operation at high speed
2. Maximum flexibility of use
3. Simplicity of equipment design, for economical operation and maintenance
4. Components far sturdier than required, for continuous, unfailing service.

Examine any unit of Scott equipment for its many features of advance design and construction. The fully counter-balanced cylinders, over-sized journals, mounted in large roller bearings close to the body of these cylinders, provide maximum rigidity—plus a specially designed lubricating system, insuring smooth, trouble-free extra-high speed press operation; the over-all symmetry of design and dynamic balancing of rapidly rotating parts. Watch its smooth, effortless operation, at highest speeds—and you will have just a few of the reasons why "SCOTT" stands for Leadership in newspaper equipment.

Write today for the booklet describing the outstanding advantages of SCOTT printing units.

Buy with CONFIDENCE - - - Buy SCOTT

WALTER SCOTT & CO., INC.

PLAINFIELD, NEW JERSEY

48 MORRISON SAW TRIMMERS in CHICAGO NEWSPAPERS Help Keep Composing Room Costs DOWN!

MORRISON 3-A SAW TRIMMER

Here's the waste-cutting, money-saving leader in saw trimmers, the fastest and most versatile trimmer made. Model 3-A is designed for easier handling, precision accuracy, greater safety and improved visibility. Has its own saw grinder, trimmer grinder that avoid "outside charges". Features include: "behind the gauge" workholder, 75-pica gauge, 135-pica extension gauge, right and left hand miter vise and other DeLuxe Equipment.

Like most of the nation's leading newspapers, the Chicago Daily News (20), Herald American (13), and the Sun-Times (15) long ago proved the time-saving, cost-cutting ability of MORRISON SAW TRIMMERS in their composing rooms. More Morrisons are added each year, to maintain their "one-saw-for-every-two-ad-frames" operating efficiency, recommended by modern composing room foremen.

Write for catalog on:

- Model 3-A Saw Trimmer
- Model 45 Saw Trimmer
- Model 45 Special Bench or Cabinet Saw Trimmer for Small Shops
- Morrison Slug Stripper
- Morrison Plate Beveler
- Morrison Router and Type High Planer
- Strip Material Cabinets, Waste Receptacles, Universal Saw Blades Router Bits, and Jigsaw Blades.

Symbol of Operating Economy

THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

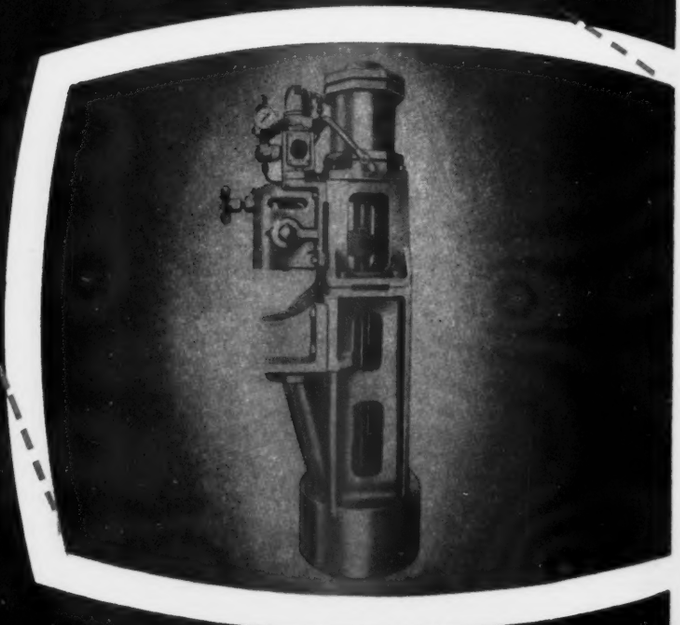
1 of 6 reasons why

THE *NEW* HEAVY DUTY PONY AUTOPLATE *produces* BETTER PLATES F-A-S-T-E-R

REASON #1

THE ELECTRO PNEUMATIC PUMP

Automatic, push-button controlled pouring of metal into the casting box, quickly, safely . . . in the exact amount required. Operates only when vacuum is applied; water circulating; matrix in casting box; core locked in casting position. Signal light indicates that plate is ready for removal.



IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY

EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

PRINTING EQUIPMENT Engineer

November 1954

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

CONTENTS

Bar-Plate Crodon Process for Rule Diecutting Industry 31
By JACK POLAYES

Paper Rolls Moved by Conveyor System 33

Photoengravers Discuss Techniques to Bring About Renaissance in Industry 34
By LOUIS FLADER

Phototypography is Major Topic at ITCA Meeting 36
By A. G. FEGERT

Individual Responsibility Cannot be Negated by Terminology Changes 37
By JOHN L. FOY

Books 37
Point of Purchase Cardboard Displays, 37
Plant Lighting Bulletin, 38

Alkali Dispersible Resinous Adhesives 40
By M. S. KANTROWITZ

Patents for the Graphic Arts 42

News Items 44

Conference Dates 47

Equipment and Supplies 8
Full-Hydraulic Challenge Cutter, 8
Type Form Reproduction by Brightype Method, 8
Newspaper Bundle Wrapper Device Eliminates Lifting, 8
Cold Cathode Lighting Bulletin, 10
Batch Counting Machine, 10
Dirats Pre-top Pre-sensitized Photo-engraving Plates, 10
Hydraulic Standing Press, 10
Cargo Lift, 14
Screen Process Printing Drier, 14
Copyfitting System Enlarged, 14
Automatic Banding Machine, 19
Narrow-Web Flexographic Press, 19
Variable Speed Drive for Raised Printing Machine, 20
Southworth Corner Cutter, 20
Envelope Inserter, 20
Paisley's Resin Adhesive, 24
Universal All Purpose Truck, 24
Maintenance Booklet, 28
Paper Chuck, Plate Truck, Margach Pig Truck, 28
Lithographic Makeready Tissue, 60
Gravure Doctor Blade Grinder, 61
G-E Variators Bulletin, 61
Monsanto Booklet, 62
Motor Control Center, 62
Oscillating Roller for Multiliths, 62
Small Darkroom Camera, 63
Offset Press Blanket, 63
Heidelberg Cylinder Press, 64
Magnet's Ink Remover, 64
Ideal's Roller Folder, 64
Photosensitive, Anodized Aluminum Sheets, 64
Gray Contact Screens, 66
Wrapping, Bundling Bulletin, 66

Advertisers' Index 66

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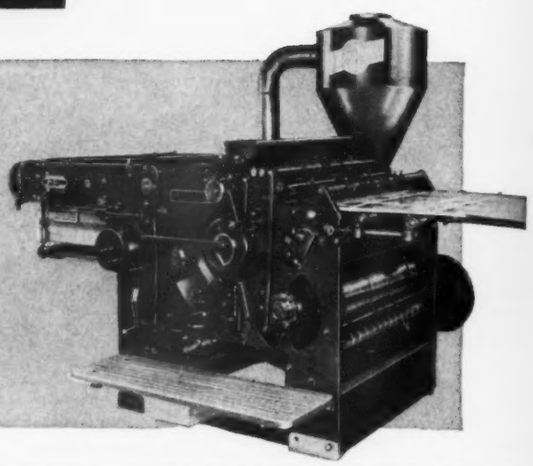
Printed in U. S. A.

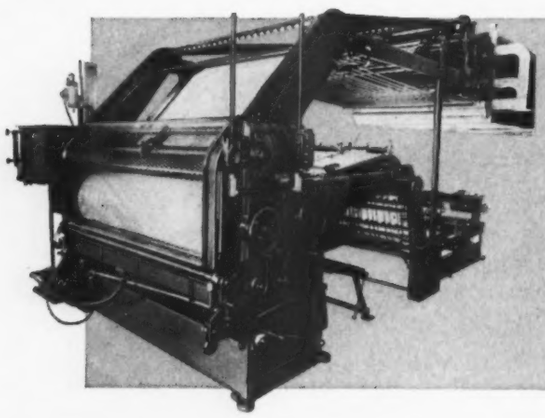
AN INDUSTRY-WIDE TECHNICAL MAGAZINE

CHRISTENSEN... for Pressroom Profits

DEXTER

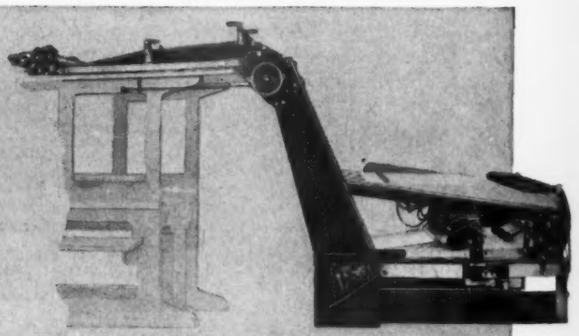
BRONZING Equipment will bring new jobs into your shop . . . and a Christensen High-Speed Bronzer attached to your press will mean increased profit with low operating costs. Matches the practical running speed of your press . . . exhauster-reclaimer keeps bronze out of the pressroom and in the machine.





VARNISHING of labels, magazine covers, circulars and gift wrappings enhances both product appearance and profits. The Christensen Varnishing Machine operates at almost twice the speed of any other present varnisher. Dual-level oven decreases floor space required. The Christensen will handle paper or board in widths up to 78 inches.

STREAM FEEDING with the Christensen Continuous Feeder means no stopping of the press . . . more printed sheets per hour. Improved register because sheets arrive at register position at one-sixth the speed of sheet-by-sheet feeders. Floor loading reduces operator fatigue, reduces loading time, eliminates stairs and platforms.

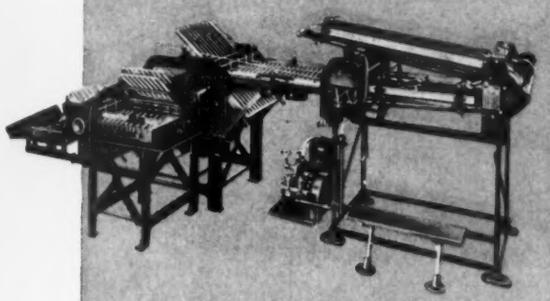


DEXTER

FOR FURTHER INFORMATION ON ANY OF THESE

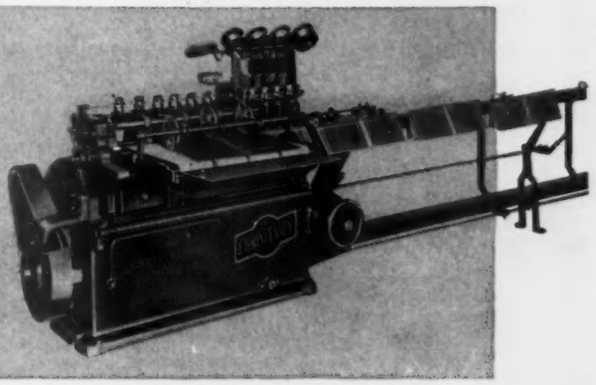
DEXTER

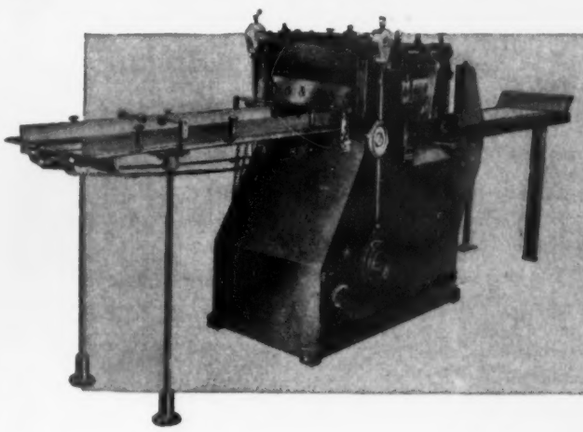
Profits from Pamphlets!



FOLDING is the first step in achieving profits from pamphlets . . . and Cleveland Folders, available in a wide range of sizes, are the standard of the industry. Precision-built, of top quality materials and workmanship, every Cleveland is designed for many years of high-quality, high-speed production.

GATHERING & STITCHING of folded signatures is the next step to bindery profits. The Christensen Gang Stitcher, in the model best suited to your needs, will gather and saddle stitch as fast as operators can feed it . . . up to 7500 books or gangs per hour with McCain Automatic Feeders . . . with unvarying accuracy and reliability.





TRIMMING with the McCain Automatic 3-knife Trimmer not only increases profits but saves floor space and handling expense. Untrimmed books from the Christensen Gang Stitcher are automatically conveyed to the McCain Trimmer where 3 sides are trimmed, and finished books delivered ready for wrapping or packing. Books can be trimmed at speeds up to 7500 per hour. Attachments are available for cutting apart books stitched two-up or with bleed trim.

DEXTER MACHINES WRITE

DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

A PRACTICAL CHRISTMAS GIFT FOR PRINTERS!

Does selecting a gift for a business associate or someone in the printing plant present a problem to you? Then here's an answer—a subscription to the industry-wide technical magazine, PRINTING EQUIPMENT *Engineer*.

Men interested in printing plant production find each monthly issue worth-while reading. It gives them the latest information on plant engineering, research, printing processes, equipment, supplies, presswork, paper problems, platemaking and so forth.

This year give a subscription to PRINTING EQUIPMENT *Engineer*. It'll be appreciated.

Subscription Price—$4.50 a year

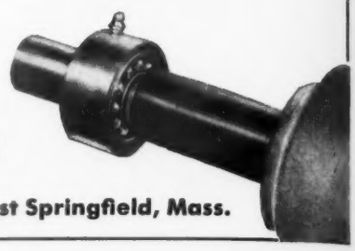
PRINTING EQUIPMENT *Engineer*
1276 West 3rd Street • Cleveland 13, Ohio

MODERNIZE with BALL BEARINGS

Eliminate:
- Streaking and bouncing
- Overheating of journals
- Daily lubrication
- Expensive bushing replacement

Reduce:
- Friction
- Load on drive motor
- Oil damage to rubber and blanket surface

for the FORM ROLLERS of your PRESS



ALICO, Inc. West Springfield, Mass.

Specializing in Makeready Reduction

VANDERCOOK PRE-PRESS SYSTEM

VANDERCOOK & SONS, INC.

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Western Office
3156 Wilshire Blvd., Los Angeles 5, Calif. Phone: DUnkirk 8-9931

Equipment and *Supplies*

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Full-Hydraulic Challenge Cutter—A small size cutter with hydraulic power applied to both knife and clamp has been announced by The Challenge Machinery Co. The style 193F Full-Hydraulic Challenge Cutter measures 19⅜ in. between housings. Incorporated in the model are a two-hand starting mechanism, duplex measuring tape, non-repeat knife and positive back-gauge. For further details, please mention PEE No. 345 in your request.

Type Form Reproduction By Brightype Method

An advance showing of a reproduction process, called the Brightype Method, was held at the home office and factory of the Ludlow Typograph Co. to members attending the Intl. Typographic Composition Assoc. convention in Chicago recently. The purpose of the Brightype Method is to produce on sensitized film, paper or glass a facsimile of the printing surface of a letterpress printing form. This is done by a special treatment of the form. The prepared form is then photographed, using a special camera and auxiliary equipment. Printing forms may consist of any combination of Ludlow, Linotype, Intertype, Monotype, foundry type, line and halftone photoengravings in copper, magnesium and zinc, also electrotypes and stereotypes. For further details, please mention PEE No. 331 in your request.

Newspaper Bundle Wrapper Device Eliminates Lifting

By means of a slot device with opening flush in the top of the mailing table, states Bundling Aid System, the placing of top and bottom wrappers on stacks of, for instance, 50 more or less newspapers can be accomplished at up to 8 stacks per min. per slot (two slots per table from one press conveyor) while the press is operating. As is shown in the accompanying illustration, the mailer at the right lifts a wrapper from the pile behind him and inserts the bottom bundle wrapper in the slot while the mailer at the left shoves the stack of papers along the table. The wrapper is so placed that the forward end projects sufficiently from the slot to permit

the stack to pull the wrapper with it so the stack will be in the middle of the wrapper. The wrapper is withdrawn from the slot by weight of the papers when the stack is shoved over the slot. The top wrapper is then placed over the stack and the conveyor takes the stack to the wire tying machine for bundling. The slot makes it possible for the mailers to place top and bottom wrappers without lifting the stacks at any time. According to the number of pages in the newspaper, the depth the wrapper is inserted into the slot is determined by an adjustable gauge at the bottom of the slot. When the number of pages in each

(*Continued on Page 10*)

When you take the controls, you'll know how good the best really is!

You'll know it in the smooth and powerful response of superb Toggle Lever Drive, the Original Heidelberg power principle...the *only* platen press capable of 40 tons constant, even pressure throughout the speed range.

You'll know it in the split-second adjustment of "Flick-O-Wrist" Impression Control...in the positive sheet control of the "Twin-Cycle" Gripper System and the smooth Aerodynamic Sheet Delivery...in the ease of automatic "60-Second" Wash-Up...in the time-saving "One-Shot" Central Lubrication.

You'll know it, in fact, when you "feel" all 33 great Original Heidelberg "Future Features" in action. The reward: more printing pleasure *and multiplied profits* — every day of the year. Write your nearest Heidelberg dealer today for an "at your door" demonstration.

THE BEST THING NEXT TO A PRINTER

Main Distributors of Schnellpressenfabrik, A. G. Heidelberg

HEIDELBERG WESTERN SALES CO.
118 E. 12th St.
Los Angeles 15, Calif.

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Columbus 15, Ohio; Chicago 16, Ill.; Atlanta 5, Ga.; Kansas City 6, Mo.; Minneapolis 15, Minn.; Denver 2, Colo.; Salt Lake City, Utah; San Francisco 3, Calif.; Seattle, Wash.; Portland, Ore.

Equipment & Supplies

(Continued from Page 8)

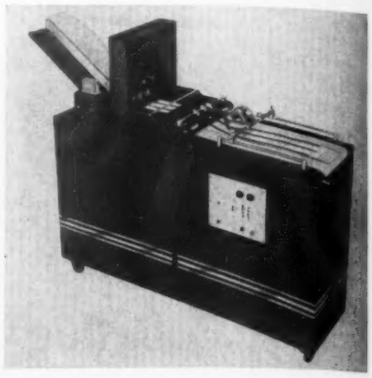
day's paper is known, the gauge is adjusted before the run. The device can be applied to existing tables. For further information, please mention PEE No. 332 in your request.

Cold Cathode Lighting Bulletin

CELine, Inc. has announced publication of an illustrated bulletin on its industrial cold cathode lighting. The bulletin has been written in non-technical manner and has been added by CELine, Inc. to its other materials on all phases of cold cathode lighting. Size, 8½ in. by 11 in. with half-fold page. Please mention PEE No. 333 when requesting a copy.

Batch Counting Machine

A machine for automatically counting off and separating into batches such items as greeting cards, sheets, folders, envelopes, cards, labels, folding boxes, etc., whether folded, flat or French folded, has been announced by Darling-Payne Corp. Designated the Electronap Batch Counter, it is equipped with selector switches for obtaining batch counts ranging from one to 99. Separation into batches is automatic. The machine has been designed with a continuous friction feed and conveyor delivery. A visual recorder provides the counted number of batches on each particular job. It is operated from any 110 v., a.c. outlet and is conveniently movable from one location to another by means of casters. For more details, please mention PEE No. 328 in your request.

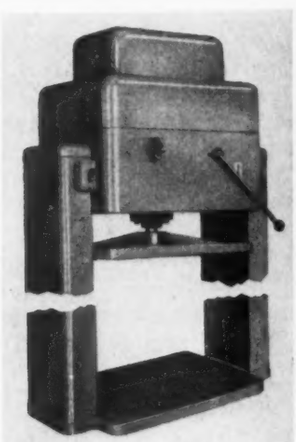


Dirats Pre-top Pre-sensitized Photoengraving Plates

Janik Dirats, of Dirats Photo-Plate Co., has announced development of pre-sensitized photoengraving plates available in zinc, copper or magnesium. The metal plates are coated with Kodak Photo Resist, developed by Eastman Kodak Co., and are reputed to have a shelf life of at least a year. Sponsor states properties of the Pre-top plates are such that precise halftone dots are formed without distortion. It is also stated that there is a saving of 10% of the cost of producing a finished plate. Other advantages claimed by sponsor are that (1) Plate cleaning is eliminated, (2) No spoilage due to oxidation in storage, (3) No spoilage of tops because of weather conditions, (4) Coating does not contain bichromate sensitizer. For more details please mention PEE No. 327 in your request.

Hydraulic Standing Press

Earll Mfg. Co. has announced an improved hydraulic standing book press. This Model ES-200 press is self-contained.



The controls can be set for pressures from 9 to 8000 lbs. The platen comes down or returns by movement of the control lever. The predetermined pres-

(Continued on Page 14)

Photo by Constance Bannister

"Ulcers...hmm...I think you should change to BURGESS MATS.*"*

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

THE GOSS PRESS

THE GOSS PRINTING PRESS COMPANY • 5601 West 31st Street • Chicago 50, Illinois

NEW Unitube GIVES FULL RANGE OF ROP COLOR

Unit Design Provides Flexibility

The unit design of the GOSS newly-designed Series 800 UNITUBE press gives a newspaper the many advantages of this unpiddled printing arrangement. Chief among advantages are flexibility and accessibility.

There is ample working space between units, enabling pressmen to web up and plate up the UNITUBE easily.

Removable fountain pans add further to convenience, because these lightweight pans are cleaned quickly and with minimum effort.

Rollers Accessible

Similarly, all rollers are reached without effort, both from the aisle and from the arch of the unit.

All controls are within convenient reach.

UNITUBE design eliminates the need for climbing, because the units are arranged on the same level—the pressroom floor. Special color cylinders mounted above units also may be plated up from the pressroom floor, and color fountain pans may be removed with equal ease.

Variety of Arrangements

Presses may be arranged with the folder at one end and rollstands at the opposite end, or with the folder in the middle and rollstands on each end.

— UNITUBE —

Demand for News Big in Britain

Although newsprint still is scarce in Britain, England is a country of newspaper readers.

J. T. Sergeant, Sales Manager of the Goss Printing Press Company, Ltd., reported that practically every adult over there reads at least one newspaper daily, and many people read two and three.

Comparing the English metropolitan dailies of eight pages with the bulky newspapers over here, Mr. Sergeant commented:

"You have lots of paper to waste."

Large Circulation

He wishes that newspapers over there could soon return to pre-war size, somewhat comparable to American dailies.

The prospects are encouraging, he stated, because the newsprint supply appears to be coming back.

Circulations of many English dailies are tremendous. The Daily Mirror of London runs off five million copies of its Sunday edition. The weekly Revelle has a circulation of 2,750,000.

Goss Preferred

Many British newspapers are run off on Goss presses. At one time it was said that there were more Goss presses in London than any other city in the world.

The world's largest rotogravure installation is an all-Goss plant. Odhams, Ltd., at Watford (30 miles north of London) has 120 Goss roto units and 13 folders—all for color printing.

— UNITUBE —

Balloon Former Gives 2nd Section

Balloon formers are available for newspapers which desire to deliver their editions in two sections. A balloon former may be installed initially with the Series 800 UNITUBE, or may be added any time in the future.

A second section provides additional flexibility, with a second back page for advertisements and a second Page One, either for profitable ads (especially good for ROP color ads) or for news.

The balloon former allows a newspaper to produce sections of equal size or of different sizes, and increases the flexibility in laying out editions. It offers advantages also in giving preferred position for advertisements.

Single, Double Reversibility Are Offered

Reversibility is a major factor in the flexibility of the newly-designed UNITUBE press, manufactured by The Goss Printing Press Company of Chicago, Illinois.

Publishers may specify either single reversibility or double reversibility. Color cylinders also may be reversed.

Adjustment for reversible operation is done simply.

Webs may be led from one unit into another unit.

Provision has been made, also, for silencing any unit.

Less Tubular Advantages

Tubular operation has been proved ideal for the majority of medium-size newspapers. Even a number of smaller dailies have found it profitable, along with some in the near-metropolitan class.

Tubular operation requires the use of only one stereotype plate per page, thus effecting production economies. Size of editions may be increased in multiples of only two pages, enabling a newspaper to adjust in direct ratio to variations in advertising linage.

Cylindrical tubular plates are easy to handle, due to their shape.

Streamlined Plant

UNITUBE presses are manufactured in the Goss Company's new streamlined plant, the only plant which was planned especially for newspaper press production.

The address of the main office and factory is 5601 West 31st Street, Chicago 50, Illinois.

— UNITUBE —

Twinned Installation Raises Production

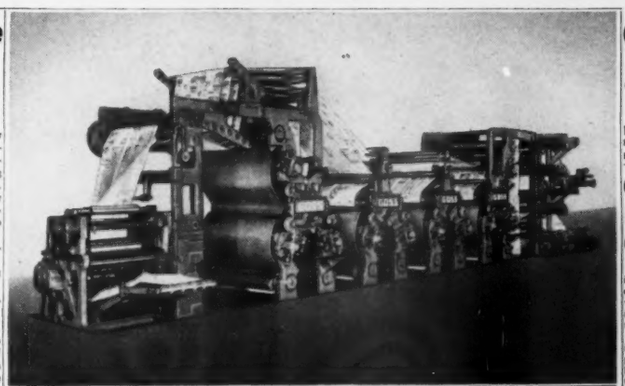
Twinned UNITUBE presses afford a marked increase in flexibility of operation. Arranging press units in two rows allows a newspaper to use only one press for lighter editions, with large savings in production costs.

Series 800 UNITUBE presses may be erected in a variety of combinations. For smaller and medium-size installations, the single row of units with one folder is sufficient. For larger installations, units may be arranged in tandem or twinned.

A tandem press may have either a single folder in the middle or a folder with upper former.

Either group of units in a tandem press may be silenced, or any one unit may be silenced.

Twinned presses may be equipped with two complete folders—with or without balloon formers—or with one complete folder and a skeleton folder. Two complete folders, of course, offer greater flexibility.



Goss Tension Gives Sure Web Control

In pressrooms throughout the country, Goss tension is assurance of effective control of the web.

The new UNITUBE press may be equipped with either manual tension or Goss Automatic Tension systems.

Braking action is provided by maple shoes, mounted in cast iron blocks, which grip the V-shaped pulleys holding the paper roll shaft. In the manual tension system, pressure is applied by spring-loaded handwheels.

With the Goss Automatic Tension, the pressman merely sets tension at the desired pressure, and the mechanism functions without further attention. A torsion spring assembly actuates a floating roller, around which the web is looped. This roller compensates for either slackness or tautness in the web, and at the same time applies or releases brake pressure as needed.

— UNITUBE —

Unitube Can Be Set on Substructures

Either rollstands or substructures may be used with the Unitube press.

Where a newspaper has sufficient pressroom height, substructures offer operating advantages, the principal one being short web leads. Substructures have positions for two paper rolls under each unit.

Rollstands may be arranged in a number of combinations, from one to four tiers high, with two paper roll positions in each tier.

Substructures and rollstands may be equipped with either electric or manual hoists.

Heavy-Duty Folder Has Capacity of 48 Pages

The new Series 800 UNITUBE press is equipped with an extra heavy-duty folder which has a maximum capacity of 48 pages.

This folder has tremendous reserve strength in every mechanism.

A kicker may be set for jogging out every 25th copy or every 50th copy.

The page cut-off is 22¾ inches.

The folder is the heart of the newspaper. By virtue of its advanced design, precision construction and strong materials, the heart of the Series 800 UNITUBE will last and last, giving trouble-free operation long after most of the present personnel of your newspaper have retired.

Record of Goss Company Is Free Enterprise Story

Following the War between the States, city newspapers were handicapped by inadequate press equipment. Most metropolitan dailies were limited to 8 pages, ran at speeds of no more than 4,000 an hour.

At about the same time that Alexander Graham Bell invented the telephone as an enterprising young presman, Sam Goss, realizing the need for improving printing machinery, began the design of a rotary press. Later he was joined by a brother, Fred, likewise a pressman and respected for his knowledge and experience in color printing.

Finally, the two brothers succeeded in building a 2-color rotary press for printing circus posters. In their spare time they constructed and assembled it in space rented in the C. M. Bullock Manufacturing Company plant on Lake Street (a firm which at that time manufactured cylinder presses). Studying their original product, they found that by reversing one cylinder it could be converted to a newspaper press. They did that and sold the machine to *The Grand Rapids Herald*.

It is not clear just when the brothers organized the F. L. and S. G. Goss Company, forerunner of The Goss Printing Press Company, but it is known that lack of capital handicapped the infant company in its struggles to gain a foothold against competitors already well established.

Chartered in 1885

A friendship had developed between the Goss brothers and Jacob J. Walser, proprietor of a combination railroad ticket office and cigar store. Having himself tried to design a ticket machine, Mr. Walser was keenly interested in and was sympathetic to their ideas and aims. Further, their ability, as well as confidence and enthusiasm, so impressed him that he decided to cast his lot with theirs.

To raise capital he sold his share of the brokerage business to his partner, Edward List. Not only did Mr. Walser put all his own eggs in the Goss press basket, but he also persuaded friends to invest their savings.

On Dec. 10, 1885, The Goss Printing Press Company was chartered, and on Dec. 22, 1885, in a gas lit office in Room 65, Reaper Block, five men held the first Annual Stockholders' Meeting. Those five, Jacob J. Walser, Samuel G. Goss, Frederick L. Goss, Benjamin P. Babcock and David Allard (an attorney representing Julia Babcock), along with Mrs. Babcock were the original stockholders.

Early Years Shaky

In its first year, 1886, the Company was hardly more than a paper entity. The Chicago City Directory of that year does not even list it, but shows J. J. Walser still engaged in his business on Clark Street, and Fred Goss as foreman of a printing company on Dearborn Street. However, the 1887 Directory lists The Goss Printing Press Company as located on West Lake Street near Peoria Street.

The first years are a record in the most inspiring tradition of free enterprise, primarily the saga of toil and discouragement, but unshakable faith and dogged determination, of the three men who staked everything to successfully build and market improved printing presses.

The definite reason is not indicated, but at their July 6, 1886, meeting the Directors acted to change the corporate name to the Chromatic Color Printing Press Company, but the following month reversed the action and reclaimed the Goss name.

A short time later, at the Nov. 20, 1886 meeting the directors voted to accept all the assets and to assume the liabilities of the F. L. Goss and S. G. Goss Company.

(Please Turn To Page Two)

Find Out How New Unitube Can Benefit You

The Goss Printing Press Company has a large staff of engineers who specialize in customer problems—arranging presses and accessory equipment to ensure you the most efficient operation for your individual needs.

Let these experienced engineers (who have solved hundreds of problems for other publishers) figure out how your newspaper can gain by pressroom modernization.

Simply tell The Goss Printing Press Company your needs and problems. There is no obligation—this free service is just one of many Goss aids to customers.

Goss Offers Full Line of Stereo Equipment

A full line of stereotype equipment for tubular operations is manufactured by The Goss Printing Press Company.

This includes the Roll-O-Mat mat roller, centrifugal scorchers, vacuum casting boxes, plate finishing machines, chipping blocks, routers and metal furnaces.

Goss also makes steel chases.

All stereo equipment is built to Goss' precision standards, of extra-strength materials, for a lifetime of hard service.

Goss Is Largest Press Manufacturer

The Goss Printing Press Company, in Chicago, Illinois, is the world's largest manufacturer of newspaper, magazine and rotogravure presses.

Goss is the only press builder which offers a complete line of presses for newspaper production, from flatbeds to giant rotaries.

The new Goss plant, at 31st Street and Central Avenue, is the only factory which was designed especially for the production of printing presses.

In the magazine press field, Goss five-and-five color presses have established records for high production and low maintenance. Similar statistics attest to the efficiency of Goss Speedry rotogravure presses.

— UNITUBE —

Anti-Friction Drive Increases Efficiency

Frictionless operation is another outstanding characteristic of the Series 800 UNITUBE press.

Except for the oscillating rollers of the inking system, all rotating mechanisms are mounted in either roller or ball bearings.

Cylinders and form rollers are mounted in roller bearings.

Cylinders and rollers are dynamically balanced, to assure smooth operation.

Wide-tooth gears transmit power with positive action, and assure long press life.

Large diameter horizontal and vertical drive shafts eliminate many gears which were used in earlier model presses, also contributing to power efficiency and reducing backlash. There are self-aligning flexible couplings in the horizontal drive shaft between units.

Tension Plate Lockup Brings Major Savings

Goss' exclusive Tension Plate Lockup affords substantial savings in pressroom operations. Blanket life alone has been increased from 50% to 300% as a direct result of Tension Plate Lockup, according to records from newspaper plants.

Form rollers likewise can be used much longer without regrinding, with Tension Plate Lockup.

A spring-loaded bar (which fits into a broached slot) holds the leading edge of the stereotype plate, while a cam-operated bar grips the trailing edge, for all practical purposes welding the plate to the cylinder under constant, uniform tension. This prevents lifting on either side of the impression contact line and also prevents buckling and other distortion.

Tension Plate Lockup assures a perfectly uniform printing surface, allowing harder packing to be used with lighter impressions, thus producing excellent printing quality.

Other benefits resulting from Tension Plate Lockup include fewer web breaks, quieter operation and better register. Tension Plate Lockup is especially a factor in producing fine ROP color printing.

In addition, the positive lockup keeps plates from working loose and practically eliminates all possibility of a plate breaking, thus contributing to operating safety.

Compact Press Delivers 40,000 Papers an Hour

The UNITUBE is a completely redesigned, fast production press, delivering newspapers at a maximum speed of 40,000 papers an hour. It was engineered to meet the exacting needs of growing, progressive dailies, especially those in expanding communities.

It produces well printed and neatly folded papers at all press speeds.

The UNITUBE offers publishers the utmost capacity for ROP color printing. Color cylinders may be mounted over any unit, enabling the newspaper to print color without sacrificing black press capacity. Two color cylinders, complete with inking arrangements, may be mounted above any or every unit.

The color plate cylinder runs in contact with the impression cylinder of the printing couple over which it is mounted. This allows very short web leads, which contribute to exact register and fine printing quality.

Webs may be led from one unit into another, if desired.

All Features Proved

Incorporated in the newly-designed UNITUBE are engineering principles and mechanisms which have proved outstanding in the giant GOSS presses which run off the leading metropolitan daily newspapers by hundreds of thousands of copies.

GOSS reputation for precision manufacturing has been world renowned for many, many years. In pressrooms everywhere, GOSS presses are noted for their endurance and dependability.

Precision Stressed

The Goss Printing Press Company meticulously builds every press and piece of stereotype equipment to the same high specifications.

This Company's preeminence in the magazine and rotogravure press fields stands as additional guarantee of the performance of its efficient tubular newspaper presses, headed by the ultra-modern, streamlined UNITUBE.

— UNITUBE —

Goss Continuous Ink Feed Assures Quality Printing

Exceptionally fine printing quality is assured by the Goss Continuous Ink Feed System, which provides a smooth, even flow of ink in direct proportion to type, halftone and solids requirements.

This produces minute gradations in tone necessary for faithful reproduction of light screens, sharp line detail, heavy solids and halftones in black-and-white, spot color and full four-color ROP work.

Regulates Ink Flow

Keys regulating the flow of ink to each column of every page permit accurate adjustment for obtaining good tones.

Goss' exclusive spiral roller picks up a film of ink from the fountain roller, spreading it satiny-smooth.

Removable fountain pans have a capacity of 47 pounds. They are convenient to handle and are easily cleaned.

Special color pans have a capacity of 18 pounds, affording a significant saving in colored inks.

Accurate Impression

Another factor contributing to quality printing is Goss' micrometer impression adjustment on the Series 800 UNITUBE press. This not only allows impression to be set accurately, but it locks the impression securely. It allows compensation to be made for minute variations in packing thickness.

In every way, Goss designers have endeavored to make the Series 800 UNITUBE the ideal press for the medium-size newspaper.

Wherever you go in pressrooms, Goss equipment is able to perform more than is expected of it, by virtue of the extra strength which has been put into every part.

— UNITUBE —

Use of Rewinder Saves Newsprint

A substantial saving in paper and time is effected through use of the Goss Rewinder, which may be installed on any UNITUBE press.

The rewinder enables pressmen to rewind bumpy or damaged rolls, which otherwise could not be used or which would cause trouble in running.

The rewinder also increases pressroom efficiency by providing full rolls for all units, thus eliminating time-consuming stops for splicing rolls during runs.

Tubular Operation Offers Advantages

Tubular operation is the most economical in the rotary newspaper press field.

For this reason, it is designed especially for medium-size newspapers.

Among advantages, in addition to moderate investment in equipment, are that only one stereotype plate is required per page, the size of editions may be increased in multiples of two pages and power requirements are low.

Tubular operation allows flexibility, while keeping pressroom expenses at a minimum.

— UNITUBE —

Reserve Strength Built in Every Part

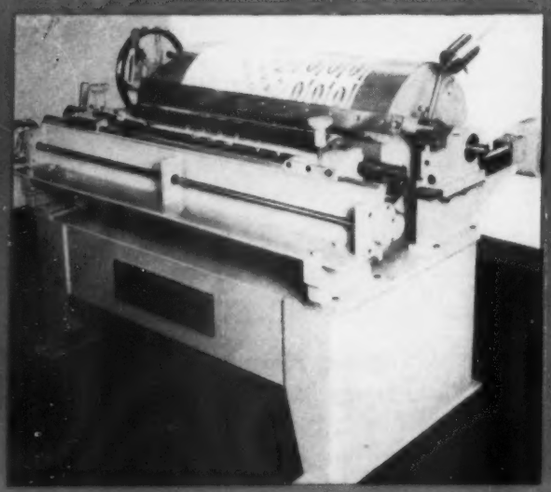
Sturdy construction starts in the frames, which have been designed to absorb vibration and which are made out of metals adapted especially for their function.

Drive mechanisms are made of high tensile strength alloys which have been tested by accurate scientific measurement to guarantee a great safety margin of reserve strength. Diameters are based on careful computations by veteran engineers. Pitch lines and number of teeth are based on highest mechanical standards.

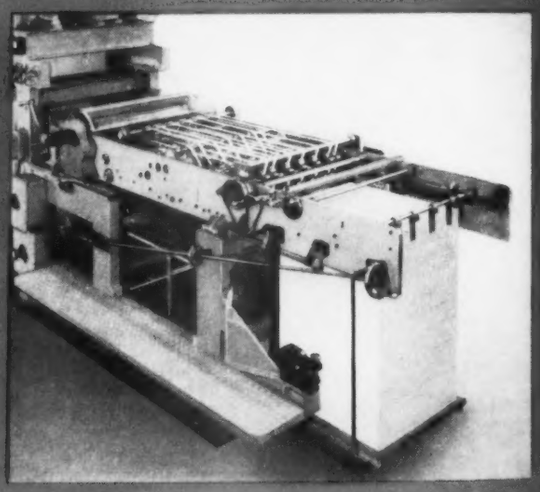
Bearings (roller bearings and ball bearings) likewise have been selected on the basis of liberal reserve strength, to assure long trouble-free operation of the Series 800 UNITUBE.

The UNITUBE is built for high production and fine performance.

PA Gravure Press mass produces wraps for bread, soap, food and other packaged products; and prints labels, catalogs, direct advertising, calendars, gravure specialties.



Rotogravure Cylinder Proof Press in standard widths of 40", 50" and 60" provides composite or progressive proofs, shows color separation, etching, register prior to printing.



Hi-Speed Rotary Sheeter and Auxiliary Rewind delivers 15,000 accurately cut and squared sheets an hour. Folders and rewind deliveries are also available.

There's an ATF gravure press and auxiliary equipment to meet your every package printing need

If hard-to-handle stocks, difficult inks, inadequate speeds, lack of auxiliary equipment, or insufficient quality control have raised a printing problem, you'll find the answer at ATF.

You'll see a line of presses that will handle laminated foil, glassine paper, cellophane or lightweight board; that will lay down one to eight colors—ink, lacquer, varnish or metallized inks.

You'll choose from web widths up to 73″, speeds up to 1250 ft min for the mass production of wrappings for bread, soap or food; labels, gift wraps, catalogs, direct mail, calendars; and a wide variety of rotogravure specialties.

You'll find deliveries for accurately cut squared sheets, rewound rolls, or folded signatures as well as gravure proof presses and cylinder engraving equipment.

And your pressmen will like ATF's virtually trouble-free operation. Unique ATF-Klingrose features (listed below) keep downtime to the minimum and enable you to turn out top-quality gravure reproduction every time. For further information write American Type Founders, *a subsidiary of Daystrom, Inc.*, 230 E. Sandford Blvd., Mt. Vernon, N.Y.

ATF-Klingrose gravure know-how gives you:

Pendulum-Action Impression or Two-Roller Impression
Hydraulic Impression control
Cascade Inking eliminates splashing, skips in printing
Pneumatically operated doctor blade pressure control
Evenflow Pumping maintains uniform color throughout entire run
Fast Wash-up keeps changeover time to a minimum
Hi-Speed Drying for each color at high press speeds
Turning Bars placed between any two stations provide flexibility

A complete custom line of rotogravure press equipment:

Wide web, Heavy-Duty press
Pendulum-Action press
Single color press for paper decorating
Low-cost two-color press
Rotogravure cylinder proof press
Rotogravure unit for printing and coating
Sheeters, rewinders, folders and auxiliary equipment

K.4.1

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure... Letterpress... Offset... Flexographic

3 times our former productive capacity on web-fed, gravure and offset equipment now serves you in ATF's Mount Vernon plant.

BLACKENITE X 23T
ELIMINATES METAL PICK-UP ON VISE JAWS of TELETYPESETTER FIELD TESTED and PROVED

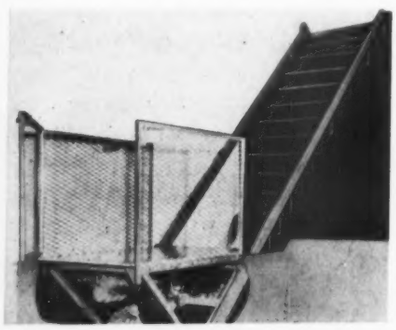
Equipment & Supplies

(Continued from Page 10)

sure is indicated on a gauge located near the operating lever. The motor and hydraulic mechanism are self-contained in a special housing. The standard press weighs approx. 1170 lbs. crated; overall height is 85 in.; width is 39 in. Lower platen is 21 in. by 29 in.; upper platen measures 19 in. by 27 in.; space between open platens is 45⅝ in.; closed, 22⅝ in.; stroke is 23 in. The ram travels at a speed of 12 in. per sec. Press is finished in a gray enamel; operated by a standard 1 h.p., 3 ph., 220/440 v., 60 cy. motor. Other types of motors are available. Presses can be had with special fixtures or with a shorter or longer ram stroke (upper platen). For further details, please mention PEE No. 346 in your request.

Cargo Lift

The Cargo Lift was recently announced by the Charley Bros. Mfg. Co. The lift, installed over a stairway or bolted to a



side wall, is used for passengers or freight. The elevator operates on electric current, is equipped with safety devices, push buttons and controls operating on a low voltage system. The elevator is in three sizes, 500, 1000, and 2000 lb. capacities and travels up to 60 ft. per min. Alterations necessary on building for stairway models consist of a small pit at the bottom of stairway, and for the trap-door or open type, a hole cut in the top floor for entrance of elevator. Units stop flush with floor level, and in down position do not interfere with stair usage. For more details, please mention PEE No. 344 in your request.

Screen Process Printing Drier

An experimental screen process print drier which is claimed to dry silk screen prints so they can be stacked, without offsetting, in 5 sec. or less has been developed by the Eastman Kodak Co. The unit is designed so it can be stationed behind the screen process press. It accepts wet prints from the press, passes them through a drier, and deposits them in a stack. A speed control for the drier belt permits adjustment for spacing of prints of different print length. The drier can be constructed as a separate unit for hand table production.

The drying process "scrubs away" solvent laden air at the wet surface with air of low solvent content, at the same time increasing the evaporation rate by application of heat. Air is driven through the drier by a squirrel cage fan powered by a 1 h.p. motor, delivering about 1300 cu. ft. air per min. As air leaves the fan it is blown upward through heating coils and then directed over and down through the perforated plate and recirculated to the fan. Air temperature is adjusted up to 200 deg. F. In tests conducted by Kodak, 6 ply poster board and 80 lb. coated book stock were dried by this means. Three color printing where sheets, picked from the stacking end of the drier, were promptly re-run through a press for the addition of the second and third colors. For further details,

(Continued on Page 19)

Copyfitting System Enlarged—Arthur B. Lee has announced an enlarged edition of Streamlined Copy-Fitting, a system comprised of a manual and gauge for determining type character counting and fitting of copy in a desired space. A feature of the plastic bound manual, which is printed in two colors, is a double index which includes listing of lowercase type faces in one 26 page section and listings of caps and small caps in another 26 page section. Sponsor states that more than 1450 popular foundry, Intertype, Linotype, Ludlow and Monotype type faces in sizes from 4 pt. to 24 pt. are arranged alphabetically in the manual for character count comparison. Visual character counting of any chosen type face is done with the die cut Vinylite gauge shown in the illustration, which measures 5 in. by 9 in. and contains 36 separate scales. In addition, the scales may be used for counting elite and pica typewritten copy, agate lines and the number of lines of body type from 4 pt. to 24 pt. Size of the manual is 6¾ in. by 9¼ in. Another feature of the system is computation tables for figuring of total characters in lines up to 130 characters and in depths from two to 25 lines. For more details, please mention PEE No. 334 in your request.

TROLLEY'S THE THING!
●Wrap-ups due to web breaks in long folder and color leads are hard to prevent, that is, if you don't have COOKSEY SYSTEM TROLLEYS.
Investigate the Cooksey System Today
KORTHE ENGINEERING CO.
9353 Seymour Ave. Schiller Park, Illinois
Sales Agents { The Goss Printing Press Co., Chicago
R. Hoe & Co., New York
Wood Newspaper Machinery Co., New York

WEB OFFSET PRESSES
DESIGNED & BUILT TO YOUR SPECIFICATIONS BY GEORGE HANTSCHO
●
22¾" x 36" HIGH SPEED PUBLICATION PRESSES NOW IN PRODUCTION
Over 25 years' experience designing and building presses
GRAPHIC ARTS MACHINERY, INC.
37 South 3rd Avenue • Mount Vernon, N. Y.
MOunt Vernon 7-8200

Picture of a man bringing a 4-color press into Perfect Register

Here's the control end of the equipment that provides accurate, automatic register of all colors . . . that detects and corrects variations not visible to the human eye . . . that maintains this accuracy, hour after hour, even at top operating speeds.

Simple to Operate

As shown in the photo above, the operator first brings the colors into register by manual push-button control. The corrections he makes are shown on the indicator dials in known increments. As each color is brought into exact register its control is switched to "automatic." All further corrections are made automatically and register is maintained to an accuracy of a few thousandths of an inch.

Amazing Accuracy

The new Hurletron employs a dual circuit which eliminates the tolerance zone, or dead zone, entirely. Very close running register is maintained by the integrating portion of the circuit which notes small deviations from perfect register and makes correspondingly small movements of the compensator.

Less Waste at Splices

During splices, when greatest shifts in register occur, the proportional portion of the control makes corrections with remarkable speed, thus reducing the number of spoiled copies to a minimum.

Hurletron Automatic Color Register Controls are in successful operation in the finest color printing plants in the country, both rotogravure and letterpress. They are adaptable to any web-fed press . greatly reduce waste . . insure finest quality printing . . . increase production and reduce costs.

Want more details? Write us today.

HURLETRON

Automatic

Color Register Control

Users of Model 40-J Hurletron Controls can easily convert their equipment to the new 96-J.

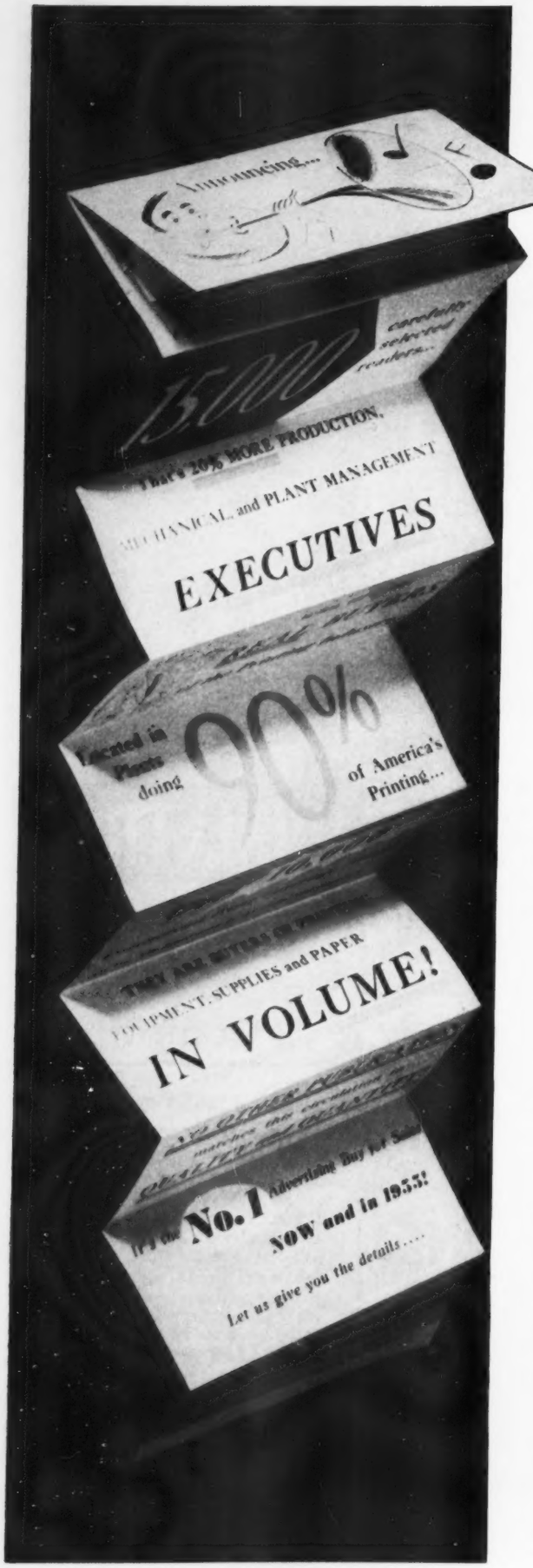
If your presses are now equipped with Model 40-J Hurletron Controls, let us show you how, with a few comparatively simple changes, you can have all the advantages of the new model 96-J

...GREATER ACCURACY
...GREATER EFFICIENCY
...GREATER ECONOMY

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

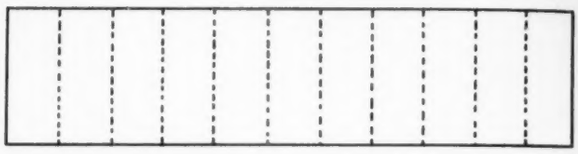
Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Moisture Controls; Continuous Nephelometer for detecting suspended solids in liquids.



a new look

IN DIRECT MAIL ADVERTISING!

11″ x 52″ — 10 parallel folds each
11″ x 4¾″ — 20 messages



Unique PRINTING EQUIPMENT *Engineer Folder Made Possible By New Folding Machine*

• When PRINTING EQUIPMENT Engineer recently announced an important circulation increase, its art director designed the unusual announcement folder shown at the left with its 10 parallel folds. This piece presents a new look in direct mail advertising... a folder that can carry 20 different sales messages... a folder which intrigues every reader.

But the same folder also presented a real folding problem to the printer since hand folding was entirely impractical. The problem was solved by having the job folded on the new Baum Folding Machine that makes from 4 to 10 parallel folds, also right angle folds... all in the same operation.

★ *This advertising space is paid for by Russell Ernest Baum, Inc.*

ATF AQUA-TROL

proves itself!

AQUA-TROL on 14 x 20 ATF CHIEF

- WHITT PRINTING CO., San Antonio, Texas
  "The Aqua-Trol on our ATF 14 x 20 Chief works fine. Please send another unit for our Harris 17 x 22 at once."
- R. A. DONLEY, JR., Brentwood, Maryland
  "The Aqua-Trol is all you say and well worth the investment I made. My only regret is that you were so long discovering it."
- W. A. HOCHMUTH, Houston, Texas
  "Production is much better with Aqua-Trol—plates last longer and colors print brighter."
- BARNES PRESS, New York City
  "Aqua-Trol has helped to insure our quality control."
- CON. P. CURRAN PRINTING CO., St. Louis, Missouri
  "After using Aqua-Trol three months on our Harris LTN, we are well satisfied with its performance."
- B. W. PIKE, Houston, Texas
  "If shop owners had to run presses, every press would have an Aqua-Trol."
- CURTIS LABORATORIES, INC., Los Angeles, California
  "Our Aqua-Trol unit has materially reduced the difficulty of maintaining good ink distribution and has enabled us to increase color saturation to a marked degree."

ATF considers Aqua-Trol an important contribution to the offset process. Proved in four years of testing, it is in successful use in hundreds of installations throughout the nation.

Its principle (patent pending) is controlled evaporation of moisture in the inking system. Its well-designed, high-quality components will give years of dependable service.

AQUA-TROL ON ATF-MANN

Aqua-Trol helps skilled pressmen do a better job and eager beginners a good job.

Let your ATF salesman show you a copy of the *Testing Laboratory Report* showing the effectiveness of Aqua-Trol in preventing ink emulsification.

Better, more profitable printing from the widest line of processes . . .

GRAVURE . . . LETTERPRESS . . . OFFSET

ATF AQUA-TROL

AMERICAN TYPE FOUNDERS — 200 ELMORA AVENUE, ELIZABETH, N. J.
A Subsidiary of Daystrom, Inc.

See other side for more advantages . . .

Daily use reveals these advantages of ATF AQUA-TROL

Plate life is substantially increased—after each transfer the plate receives a fresh layer of moisture-free ink, leaving little chance for acid fountain water to attack the plate image.

Black ink prints jet black—colors print strong, bright and consistent throughout the press run. Ink and water adjustments are less critical and seldom need attention after the run is started. Consistent color can be maintained while reloading by letting the press idle with only the ink fountain shut off.

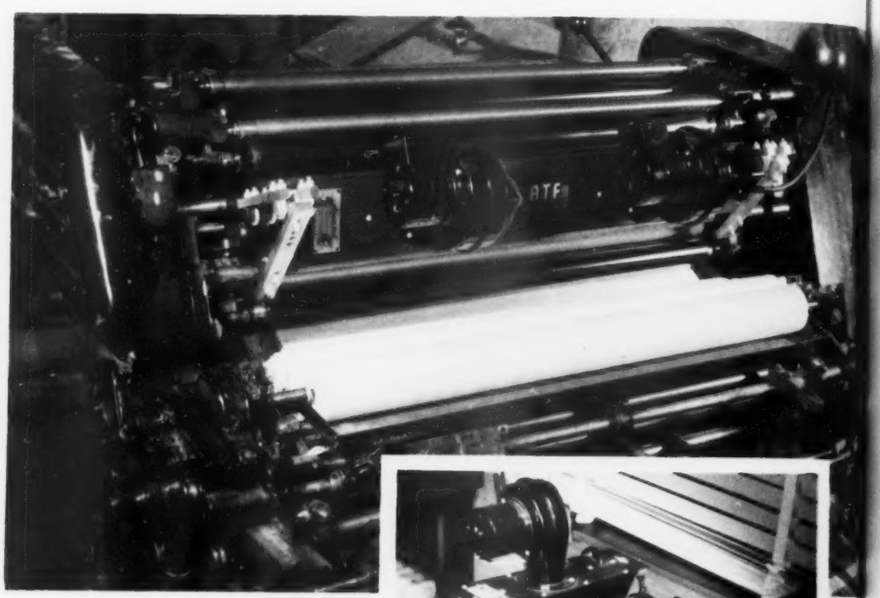
Image transfer is sharper and cleaner because the dampening system may be set to meet the requirements of the plate without danger of watering up the ink.

Moisture-free ink dries faster on paper, allowing a job to be backed up and trimmed much sooner than without Aqua-Trol.

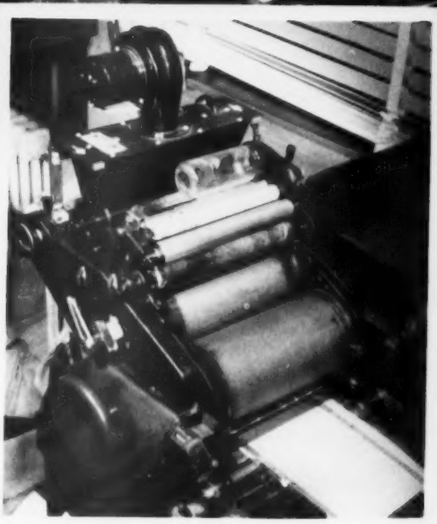
Aqua-Trol repays its cost in only a few weeks by increasing production, decreasing spoilage, and improving quality.

Easy to install.

Available for all sizes and models of presses.



Aqua-Trol on Harris LTW



Aqua-Trol on Multilith 1250

Considering the important benefits from only such a bare minimum of moisture in their ink, many pressmen across the country are proclaiming Aqua-Trol the "missing link" in the offset process.

Aqua-Trol is the practical, proven answer to one of the last dreaded variables in the offset printing process—*CONTROL OF MOISTURE* in lithographic inks.

AMERICAN TYPE FOUNDERS

200 ELMORA AVE., ELIZABETH, N.J.

PLEASE SEND AQUA-TROL LITERATURE AT ONCE TO:

NAME _____

MAKE AND MODEL OF PRESS _____

COMPANY _____

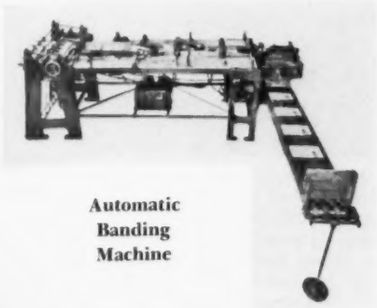
ADDRESS _____

CITY- STATE _____

Equipment & Supplies

(Continued from Page 14)

please mention PEE No. 340 in your request.

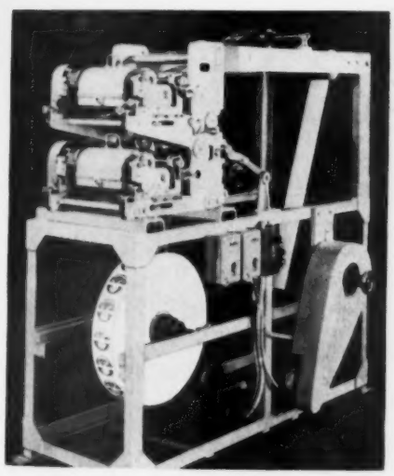


Automatic Banding Machine

An automatic banding machine designed for banding fillers from 5½ in. to 12 in. square, in either direction, using bands from 2½ in. to 9 in. wide, has been reported by W. O. Hickok Mfg. Co. Sponsor claims the machine may be switched from one band and filler size to another in 15 min. Banding quantities range from one to 200. The machine automatically adjusts to handle varying thickness of fillers. The banding machine itself measures 3 ft., 6⅝ in. by 8 ft., 8⅜ in. The delivery conveyor measures 1 ft., 4 in. by 8 ft. For more details, please mention PEE No. 329 in your request.

Narrow-Web Flexographic Press

A flexographic press for printing narrow webs has been introduced by Manhasset Machine Co. The APS-Junior occupies 10 sq. ft. of floor space. Multi



color printing speed on webs up to 12 in. wide for paper stocks is 400 ft. per min. and for films 300 ft. per min.; maximum printing repeat is 15¾ in. According to the sponsor, the APS-Junior press is suitable for printing all flexible materials including cellophane, polyethylene (in single-thickness, plain or gusseted tubing), foil, tissue, kraft, cup stock and boxboard. The press is in 2, 3 and

(Continued on Page 20)

Make sure your maintenance man sees this!

Clark's

POWRWORKER "26"*

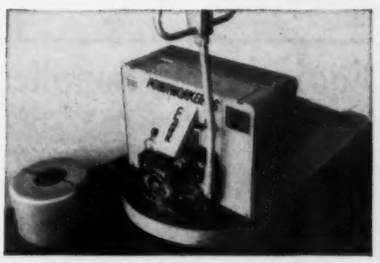
The most "Serviceable" truck ever built!

POWRWORKER "26" Pallet Truck
4000 and 6000 lbs. capacity
Also available as platform or tilting fork stacker

Ask him to compare these ACCESSIBILITY features!

1 HYDRAULIC SYSTEM EXPOSED IN 2 MINUTES . . .

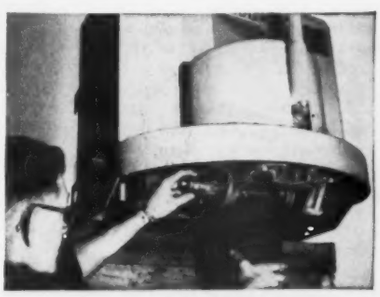
Remove 4 bolts and slip off the one-piece cover; the complete hydraulic sub-assembly is exposed. Hydraulic motor, pump, oil reservoir, valve assembly and self-aligning cylinders are immediately accessible and ample space is provided for quick inspection or removal.



2 POWER HEAD READY-TO-WORK-ON IN 2 MINUTES . . .

Split cover allows complete accessibility to the drive motor, brakes, resistor and control panel by merely removing 7 screws. Revolving head permits servicing any side of the power head without further dis-assembly. For major overhaul, the whole unit can be removed in 17 minutes.

*** The POWRWORKER "26" is only 26 inches longer than the load . . the shortest standard truck on the market!**



3 CHANGE DRIVE TIRE IN 12 MINUTES . . .

Standard Press-on type demountable tire is furnished as original equipment. Raise the truck 12 inches and loosen spanner nut which releases the axle shaft and the wheel drops out. Split wheel rim with spreader inserts allow immediate tire dis-assembly and re-assembly.

CLARK EQUIPMENT

POWRWORKER SECTION
Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 151, Michigan

☐ Please send POWRWORKER literature.
☐ Have representative call.

Name_____

Firm Name_____

Street_____

City_____ Zone____ State_____

"Two things I like here"...

...remarks the stereo staff's recent recruit. "One is that I'm working with a fine, pleasant bunch and the other is that you use Certifieds, the smoothest working mat I ever handled."

"Swell," answers Foreman Fred, "But did you ever stop to think that having a smooth working mat is one of the things that keeps the stereo crew pleasant and happy? A run of bad results and a little crabbing from out front and they wouldn't be nearly so pleasant."

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

for low cost addition of third and fourth colors

for Miehle Flat Bed Presses

Western Printing Machinery's Extra Color Letterpress Unit for Miehle flat bed presses is the answer for low cost addition of third and fourth colors.

Precision built in several sizes, it will make a three or four color press of any standard 2-color Miehle flat bed. Production specifications are the same as the press to which it's permanently attached. Synchronization is perfect. Only minor changes are required for its installation.

This unit is low in cost and requires no additional floor space as it is mounted on top of the Miehle units. Operates efficiently and economically with the Miehle.

Write for further details.

WESTERN PRINTING MACHINERY CO.
3519 N. Spaulding Avenue
Chicago 18, Illinois

wpm

Equipment & Supplies

(Continued from Page 19)

4 color models, printing widths from 4 in. to 12 in. Features of the press are sealed splashproof fountains, running register controls, constant tension control and variable speed drive. If required, the press is adaptable for feeding a slitting unit. For further details, please mention PEE No. 343 in your request.

Variable Speed Drive for Raised Printing Machine

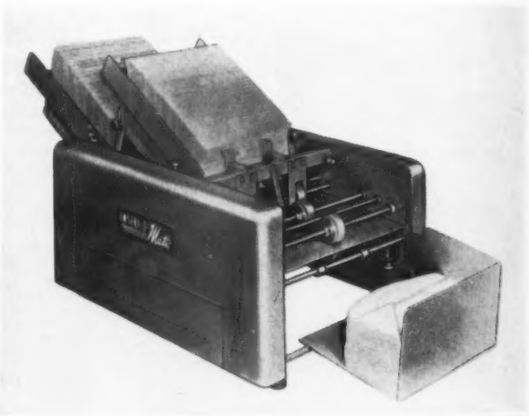
Worthington Corporation has reported installation of its Model A Allspeed variable speed drive on the Virkotype Raised Printing Machine. The Virkotype machine is usually connected to the delivery end of a printing press where the freshly printed sheets are received for powdering, heating and cooling operations. The Allspeed Drive is designed to control the speed of the Virkotype's conveyor which is required for different thicknesses of paper stock and size of printing areas. For more details, please mention PEE No. 335 in your request.

Southworth Corner Cutter

A motor driven corner cutter for cutting 4½ in. lifts of stock has been announced by Southworth Machine Co. The machine is suitable for round or straight cornering. Adjustable side gauges determine stock positioning. An automatic clamping device holds stock in position for cutting. A light pressure trip foot pedal with a safety guard to eliminate accidental operation controls the machine. A ⅓ h.p. motor unit

(Continued on Page 24)

Envelope Inserter—The Model 51 Insert-O-Matic automatic envelope inserter is reported by Printing Devices, Inc., to have a speed of 3000 insertions per hr. The machine will accommodate standard envelopes ranging in size from No. 6 to No. 10, as well as odd size and window style envelopes. The Model 51 is a table model machine which measures 40 in. by 16 in. by 18 in. high. It is equipped with two separate feeding stations, one for envelopes and one for enclosures, and is designed for inserting from one to six folded sheets with or without staples. Multiple enclosures, such as a letter, folder and reply card, are handled and fed as one unit. Check detector, flap closing and sealing attachments are also available. For more details, please mention PEE No. 336 in your request.



BLACKENITE X 23T STRETCHES YOUR

the LEADER sets the pace

More than a century ago, Sam'l Bingham produced the first commercial printing roller and set the pace of leadership in the roller industry. Through constant research, experiment, and experience, his successors have maintained that leadership by producing rollers which made possible the use of faster presses, modern inks and better techniques in the pressroom.

THESE ARE FACTS:

High-speed presses use up the effective mileage on rollers sooner than older, slower presses.
Long continuous runs wear out rollers faster than infrequent press runs.

Replacing rollers as soon as their life of efficiency has been spent guarantees lower production costs and increased quality of printing.

the Right Roller right away

Rubber rollers re-ground quickly and accurately in each of our modern factories—

CHICAGO—Home Office

ATLANTA	HOUSTON	NASHVILLE
CINCINNATI	INDIANAPOLIS	OKLAHOMA CITY
CLEVELAND	KALAMAZOO	PITTSBURGH
DALLAS	KANSAS CITY	ST. LOUIS
DES MOINES	MILWAUKEE	SPRINGFIELD, O.
DETROIT	MINNEAPOLIS	TAMPA, FLA.

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS

RUBBER . . COMPOSITION . . VULCANIZED OIL Rollers

DEPENDABLE POWER provided by G-E electronic press drive on Goss Headliner permits Oklahoma Publishing Company to run editions of *Oklahoma City Times* and *The Daily Oklahoman* at average of 60,000-pph, when required in daily production.

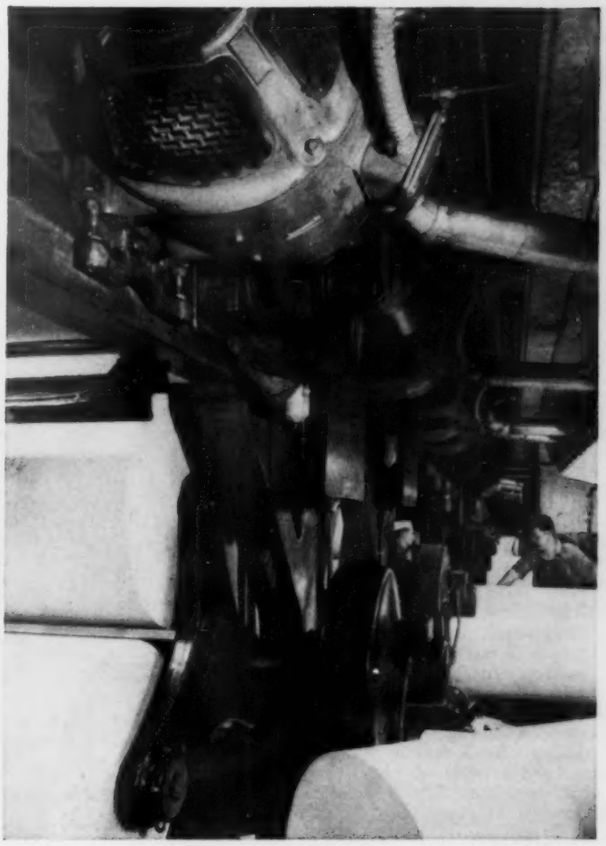
Oklahoma City Times runs 81,000

FULL SPEED PASTES are no problem—even at 60,000-pph—because Wood Automatic Autopasters powered by G-E Thy-motrol* drives provide positive splices regardless of press speed.

*Reg. General Electric trademark.

PRODUCTION CONTINUITY is aided by dependable control; G-E drive eliminates threading motors, gears, clutches, and mechanical brakes, greatly reducing mechanical maintenance.

RUGGED, LONG-LIFE G-E power and control equipment is housed in these compact cubicles for easy accessibility; simplified control has long-life tubes, contains no power contactors.



INDIVIDUAL G-E DRIVE MOTORS for each unit are press-mounted. Rated at 50 hp, they provide plenty of smooth, dependable power for high-speed newspaper production.

48-page final edition in 1½ hours

G-E electronic drive powers new Goss Headliner press to meet 60,000-pph pace for all editions at Oklahoma Publishing Company

Mr. L. S. Vance, Business and Production Manager of the Oklahoma Publishing Co., publishers of *The Daily Oklahoman* and *Oklahoma City Times,* says of their new G-E electronic press drive: "The ease of installation and start-up met all our specifications. We started up on time because all the equipment arrived on the promised delivery dates.

"Recently, we were running a few minutes late and needed 57,000 papers during the next hour. We ended up with a ***net*** production of 57,000 in 56 minutes —and we hit the street on time. The presses actually exceed 60,000-pph many times during daily production." The Oklahoma Publishing Company editions now start later and finish earlier using one press with G-E electronic press drive than they did previously using two presses.

Dependable power, smooth acceleration and braking, as well as dependable service, are only a few of the many advantages of low-maintenance G-E electronic press drive. For complete information contact your nearest General Electric Apparatus Sales Office or write for Bulletin GEA-5523 . . . today!
General Electric Co., Schenectady 5, N. Y. 653-26

Engineered Electrical Systems for Newspaper Plants

GENERAL ELECTRIC

BLACKENITE X 23T

ELIMINATES METAL PICK-UP ON VISE JAWS of TELETYPESETTER FIELD TESTED and PROVED

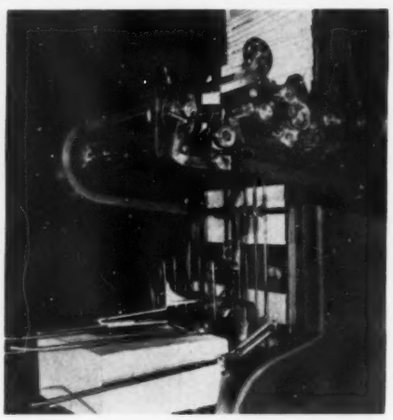
Equipment & Supplies

(Continued from Page 20)

powers the cutting head. The 22 in. by 36 in. working table is floodlighted and a built-in chute removes the chips. Either a knife and matched die, or knife and nylon cutting block can be used on this machine. Round cornering knives are available in sizes from ⅛ in. to 1½ in. radii and straight knives corner up to 2⅜ in. For more details, please mention PEE No. 337 in your request.

Paisley's Resin Adhesive

Res-N-Seal, used as a gum for envelopes, was recently announced by Paisley Products, Inc. Sponsor reports the adhesive does not curl and produces an envelope which stays flat even through extended storage and will resist flap sticking. Res-N-Seal is pliable; there are no hard crystals of glue. It is claimed that envelope imprinting presses and automatic platens can be run at top speeds without jam up, and is said to be also true for printers of gummed label stock and coin wrappers. The gum can be used on all stock, including 100% rag bond, kraft and coated paper. For



further details, please mention PEE No. 339 in your request.

Universal All Purpose Truck

A hand truck, platform truck and heavy duty dolly are combined in a single truck. The Universal Truck was recently announced by Techtmann Industries. The overall height is 50 in. with 900 lb. capacity. By shifting the handle to vertical position right angle to the platform, it becomes a platform truck with capacity of 1600 lbs.; the platform measures 21 in. by 37 in. By removing the handle and the shoe it

becomes a dolly for handling long bar stock, pipe, timbers, etc. The truck is of

(Continued on Page 28)

cut metal melting costs with a 'SURFACE' furnace

SAVE TIME. Melts 5,000 lbs. of lead in only 2 hours. Bottom outlet with casting trough, easily swung through large arc, facilitates pig casting. **SAVE SPACE.** Hood doors, bottom outlet and valve handles can be positioned conveniently no matter where the furnace is to be placed. **SAVE FUEL.** Simple-adjusting 'Surface' burners insure complete combustion, maximum efficiency.

Pick the right furnace for your production requirements from 5 sizes with capacities of 100-5,000 lbs. They use natural gas, manufactured gas, or LP gas. Temperatures up to 1200F.

Call your 'Surface' representative or write for Literature H54-13.

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO

Speed paper handling with

ECONOMY ELECTRIC LIFTERS

The arms of the Economy Electric Lifter hold the paper at any height with an automatic brake. Paper can be "inched" up with electric power as each lift is transferred to cutting or sorting table. This positive control makes handling of paper easy so that bindery girls can do the work that otherwise would require a man's strength. Being portable, these Economy Electric Lifters can be moved about to serve in any part of the plant.

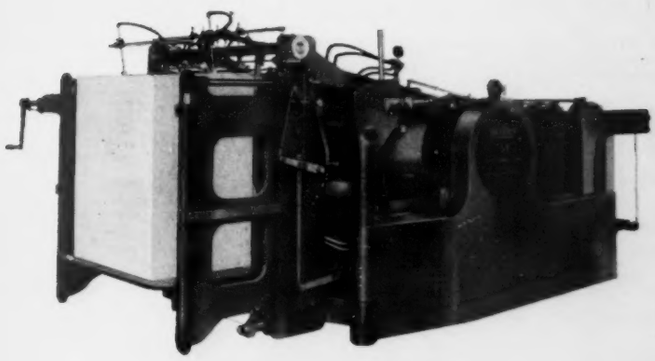
Economy Lifters are also very useful for handling skids or rolls of paper at loading platforms.

Write for complete specifications of this paper handling lifter. Our engineers can help with your particular problems.

ECONOMY ENGINEERING COMPANY

4501 West Lake Street, Chicago 24, Illinois

DESIGNED



The Miller 27 x 41 SY
Single Color Letterpress

designed by practical men to make the pressman's job less difficult. write and let us prove it.

MILLER PRINTING MACHINERY CO.
1101 Reedsdale St. • Pittsburgh 33, Pa.

HERE...OF ALL PLACES

Keep it simple–Keep it sturdy

KEEP IT CUTLER-HAMMER

CUTLER-HAMMER
MOTOR CONTROL
C-H

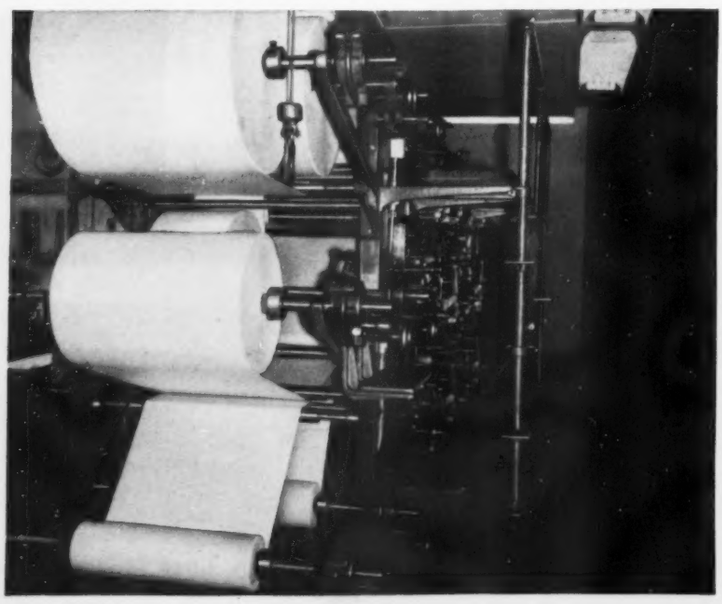
If there is any place in the world where equipment should be simple and sturdy—each segment to be completely depended on to perform its assigned role, that place is in the complexities of the modern newspaper pressroom. And as publishers learn of the marvelous job that Cutler-Hammer unit drive installations are doing, more and more of them turn to Cutler-Hammer Control for that same simple, sturdy, trouble-free equipment and dependable performance.

The story on the Cutler-Hammer unit press drive control is this: Paired with simple, sturdy, a.c. wound rotor *unit* motors are Cutler-Hammer unit controls embodying simple, sturdy industrial control designs that every plant electrician knows and can *understandingly* service.

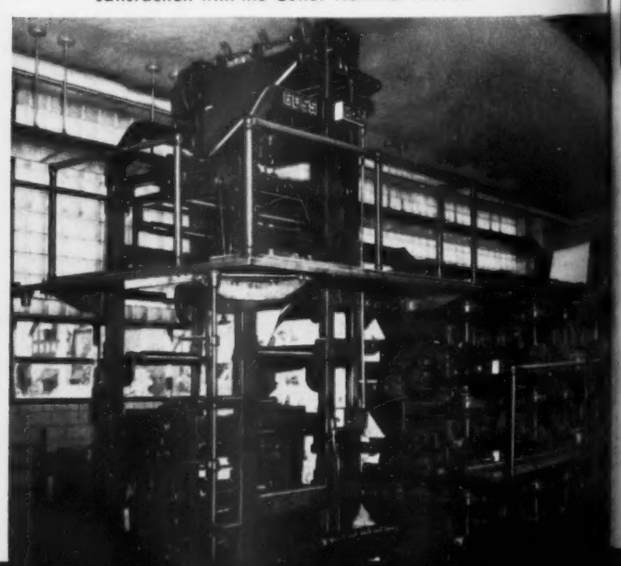
From this dependable combination you get every possible function you can require. But you get it *simply*—without headaches and without heartaches. Inching, threading, satin-smooth acceleration, high efficiencies all the way up! *REAL* synchronization of unit motors, flexibility . . . and blessed freedom from trouble.

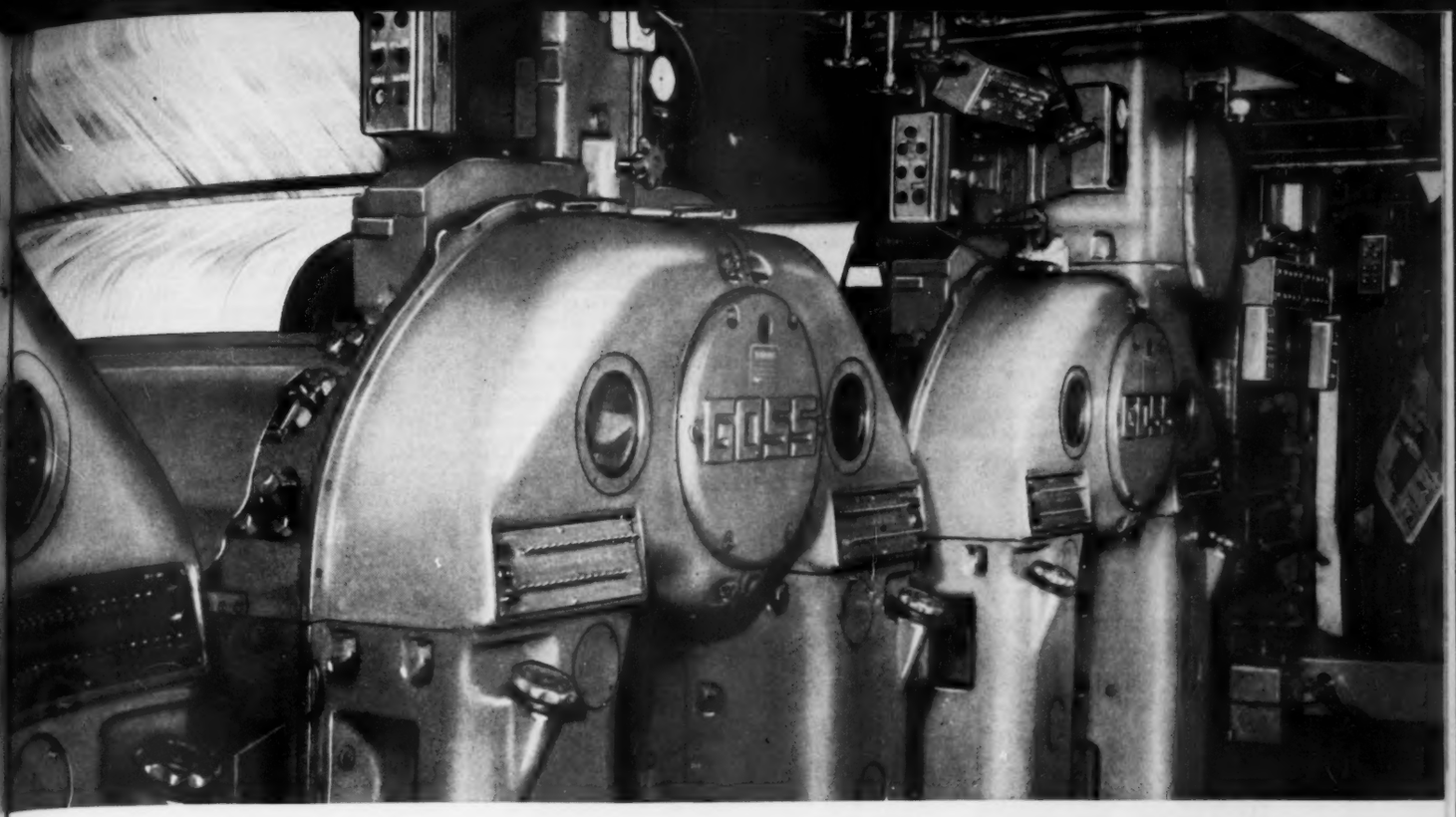
Details? Take a look at the C-H cam drum accelerator with 87 speed points. Note that inching and threading *DON'T* draw current through the battery of unit motors. No changing load adjusting resistor switches. No unbalanced loads. No circulating currents or excessive peaks. Your electrician can service this drive and he can service this control. Get these facts and many more from the Cutler-Hammer engineering representative.

CUTLER-HAMMER, Inc.
1460 St. Paul Ave.
Milwaukee 1, Wisconsin

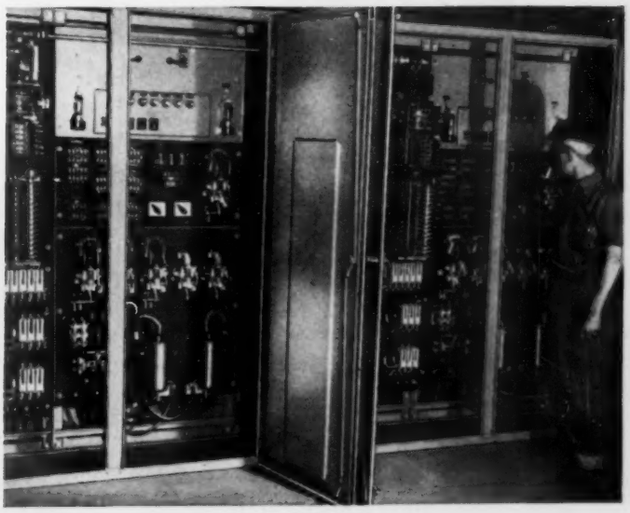


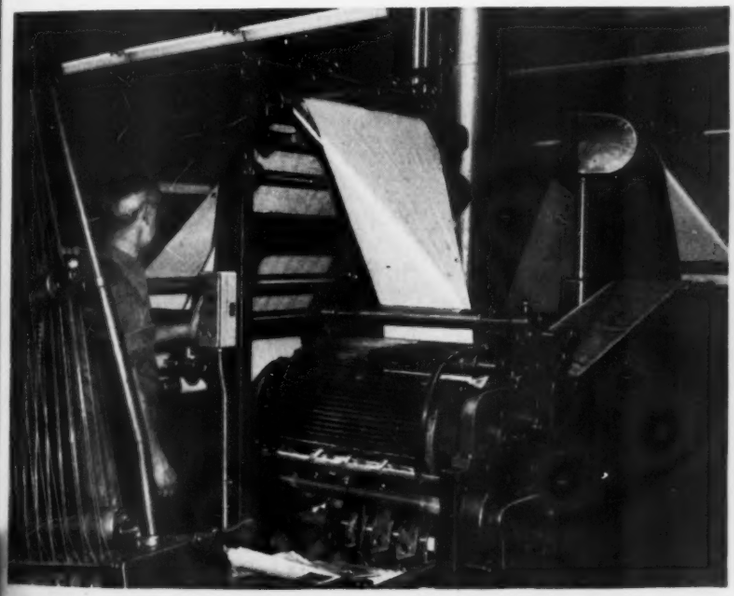
Cutler-Hammer 2 Motor Drives serve many color plants as well as local dailies such as:
APPLETON POST-CRESCENT and
THE REPORTER-TELEGRAM of Midland, Texas
Production executives of these papers report complete satisfaction with the Cutler-Hammer Drives.





Cutler-Hammer Unit Control on Goss Headliner Press in
LARGE SOUTHERN DAILY
This installation consists of 12 Headliner Units with three folders, reel-tension-paster units and 6 special color cylinders. It runs consistently at 44 to 48 thousand newspapers per hour.





Cutler-Hammer. Electronic Control for single motor drive serves each of these two Goss Tubular Presses at
THE STAR-BEACON, Ashtabula, Ohio
Mr. Howard Healy, Production Manager, says:
"Cutler-Hammer Controls give us perfect synchronization between these two presses. We are well satisfied. . . ."

CUTLER-HAMMER
WEB BREAK DETECTORS
Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

CUTLER-HAMMER
WEB SEVERING DEVICE
A Cutler-Hammer "original" that has resulted in greater total savings than any other single accessory. It instantly slashes broken web close to impression and guards against destructive wrap-arounds and costly delays—resets automatically.

CUTLER-HAMMER
MOTOR CONTROL
C-H

Equipment & Supplies

(Continued from Page 24)

steel construction, the side members of which are 1¼ in. o.d. tubing with 13 ga. wall. The 5 in. diam. molded rubber caster wheels are supplied with double ball bearing swivel plate. The 8 in. diam. aluminum alloy wheels are fitted with rubber tread and roller bearings. Truck is painted yellow. For more details, please mention PEE No. 330 in your request.

The Classified Section of *Printing Equipment Engineer* may be found on Page 65.

Maintenance Booklet

Preventive Maintenance for Industrial Trucks, written by John A. Draxler of Elwell-Parker Electric Co., includes requirements of a preventive maintenance program for industrial vehicles. Included in the booklet are explanation of the importance of good lubricants and correct lubrication, and enumeration of the principal causes of equipment failure. Also contained in the booklet are several maintenance forms used by Elwell-Parker which may be copied for a company's own use, and emphasis on the importance of accurate record-keeping and development of the proper attitude by employees toward maintenance regulations. A Preventive Maintenance Check List also is included. In requesting further information, please mention PEE No. 239.

Paper Chuck, Plate Truck, Margach Pig Truck

Three equipment items have been developed by Webb Machine Works. The first of these is a paper roll chuck for nonreturnable cores. The chuck is fabricated from forged steel with 5/32 in. wall thickness. Sponsor states chucks cannot be broken. A notch in the outer

Webb Paper Chuck

rim is furnished for Autopaster timing. An extractor is furnished with the chuck.

Another item is a plate and type metal truck. It will accommodate 14 stereotype plates in 32 in. by 16 in. space. The handle is 36 in. high. Bottom of carrying rack is 21 in. from floor. The truck is of all-steel construction. Provided at

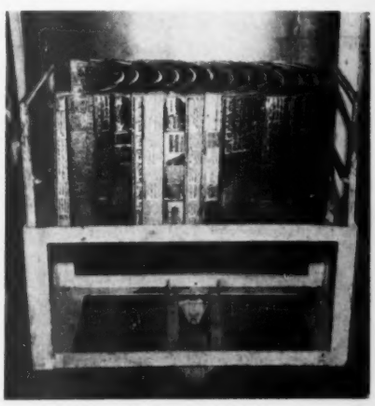
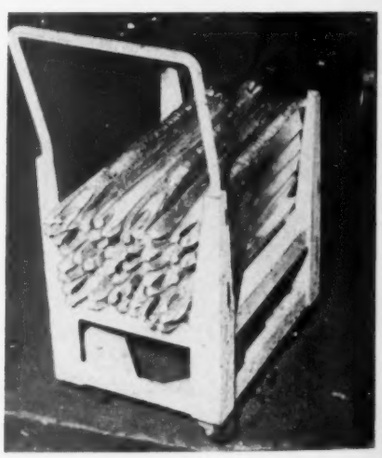


Plate and Type Metal Truck



Margach Pig Truck

center are two straight heavy duty ball bearing casters with two swivel casters at each end.

The Margach pig truck shown in the accompanying illustration accommodates 35 Margach ingots. The frame is of heavy

(Continued on Page 60)

with
TINGUE
PRINTING PRESS
BLANKETS

TIME is of the essence—in publishing — and trouble-free blankets are essential! That's why Tingue, Brown blankets are "hot news" in pressrooms throughout the land. The greatest group of press packing offered today — TINGUE — will "stand the gaff". Gauges range from .012" to .120", to meet every press condition. Be sure of sharp, clean impressions, — use TINGUE blankets.

*Reg. U.S. Pat. Off.

COMBINO—An extremely durable clean printing laminated blanket. Gauges .062", .083", .093".

TOP-DRAWSHEET—is firm, durable, economical and of long life. Gauges .016", .025", .030".

CUSHION CORK*—A highly resilient underpacking. Gauges .055" to .085".

TINGUCORK*—Much finer than "CUSHION CORK" and preferred where precision plates are available. Gauges .032", .055" to .086".

FOUNDATION—A firm, durable, oilproof under packing laminated by du Pont with "Neaprene." Gauges .032", .040", .053" to .085", .120".

Tingue Coated Felt • Uncoated Wool Felt • Gold Tympan Drawsheet • Improved Satisfaction • Sterling • Korker Under Blanket.

COATED TYMPAN PAPER—The coating by The Carborundum Co. gives better register and measurable savings in down time on runs over 50,000.

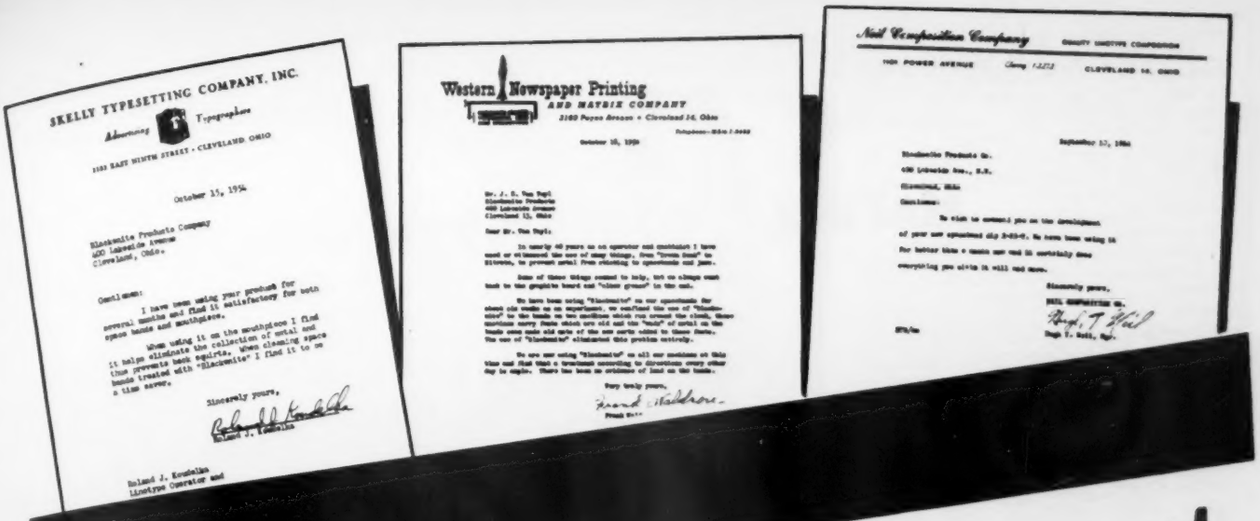
TINGULOK—This great new "clipper lacing" method is the simplest system for blanketing rotary newspaper presses

TINGUE
PRINTING PRESS
BLANKETS

TINGUE, BROWN & CO.

723 E. Washington Boulevard, Los Angeles 21, California. PRospect 6023
507 Bishop Street, N.W., Atlanta, Georgia.....ATwood 3864
1227 Wabash Avenue, Chicago 5, Illinois.....HArrison 7-0083
1765 Carter Avenue, New York 57, New York.....CYpress 9-8800

CANADIAN SALES AGENTS: ROSS WHITEHEAD & CO. LTD. MONTREAL, CANADA


SKELLY TYPESETTING COMPANY, INC.

Advertising Typographers

1103 EAST NINTH STREET • CLEVELAND, OHIO

October 15, 1954

Blackenite Products Company
400 Lakeside Avenue
Cleveland, Ohio.

Gentlemen:

I have been using your product for several months and find it satisfactory for both space bands and mouthpiece.

It helps eliminate the collection of metal and thus prevents back squirts. When cleaning space bands treated with "Blackenite" I find it to be a time saver.

Sincerely yours,

Roland J. Kosalka
Linotype Operator and

Western Newspaper Printing
AND MAYBIN COMPANY
2180 Payne Avenue • Cleveland 14, Ohio

October 18, 1954

Mr. J. S. Van Dyck
Blackenite Products
400 Lakeside Avenue
Cleveland 13, Ohio

Dear Mr. Van Dyck:

In nearly 40 years as an operator and machinist I have used or recommend the use of many things, from "Prom Bowl" to Bitumen, to prevent metal from sticking to spacebands and justifying bars.

Some of these things seemed to help, but no always went back to the graphite board and "elbow grease" to the end.

We have been using "Blackenite" on our spacebands for almost six months as an experiment, we rectified the use of "Blackenite" to the bands on two machines which run around the clock, these machines rarely ever have which are old and the "build" of metal on the bands once made old parts of the new parts added to these bands. The use of "Blackenite" eliminated this problem entirely.

We are now using "Blackenite" on all our machines at this time and find that a treatment according to directions every other day is ample. There has been no evidence of lead on the bands.

Very truly yours,

Frank Waldron

Nail Composition Company

1101 POWER AVENUE CLEVELAND 14, OHIO

September 17, 1954

Blackenite Products Co.
400 Lakeside Ave., N.W.
Cleveland, Ohio

Gentlemen:

We wish to comment you on the development of your new spacebond dip X-23-T. We have been using it for better than a month now and it certainly does everything you write it will and more.

Sincerely yours,

NAIL COMPOSITION CO.

Chas. T. Nail, Mgr.

CTN/ns

it's as easy as dunking a donut!

Just dunk and hang to dry • 1 minute!

THAT IS ALL!

...NO MORE GRAPHITE BOARD RUBBING!

with

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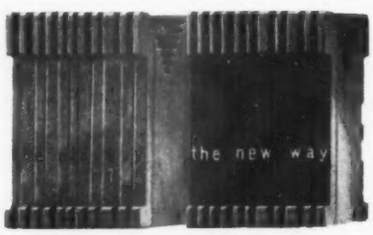

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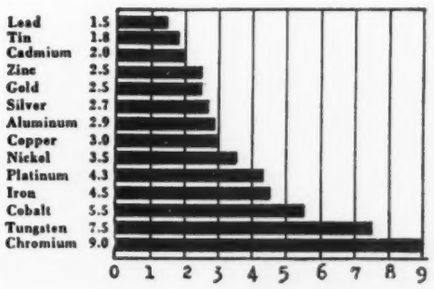


Fig. 1.— **Comparative Hardness of Metals (Moh's Scale)**

Bar-Plate Crodon Process And Its Value to the Steel Rule Diecutting Industry

By JACK POLAYES*
**President, Bar-Plate Mfg. Co.*

PROTECTION of metallic surfaces against wear and corrosion by electroplated chromium is an important contribution to modern industry. Discovered by Vauquelin in 1797, chromium is one of the hardest commercial metals available. It is exceeded in this attribute by boron, corundum, and certain other comparatively rare metals. On Moh's scale of hardness (Fig. 1) chromium is rated at 9 and the diamond at 10.

The element chromium was first electroplated by Bunsen in 1854. Except in combination with other metals its use had been previously insignificant, though it had been utilized to impart its characteristics of hardness and corrosion-resistance to alloy steels, which, in turn, derive their principal advantage from their chromium content. Some seventy years elapsed before intensive research, overcoming early difficulties of electrodeposition, provided consistently satisfactory commercial plating methods. Even today, though, many such applications continue to be the most critical and exacting of any known electroplating processes.

Since chromium plating first met with commercial success, Chromium Corporation of America has been the outstanding instrument in the development and perfection of industrial applications. With the helpful cooperation of interested manufacturers and users of plated equipment, its chemists and engineers have painstakingly checked the progressive results of research against practical operating requirements and performance. Close and continuous study of actual production conditions and their inherent problems brought about a comprehensive understanding and appreciation of the manufacturing and operating difficulties that electroplated chromium plate is designed to eliminate. Many of these have been partially or entirely eliminated by suitable applications of industrial chromium plating. Enviable performance records have been attained, and maintained for long periods by the use of chromium plate, to such an extent, in fact, that chromium plate has, in many instances, become a standard specification for the ultimate in cost reduction and operating efficiency.

In what way does the foregoing data pertain to the Graphic Arts industry with reference to the cutting and creasing operations? At Bar-Plate we have been cognizant of the fact that a jacket of greater hardness than heretofore produced would be desirable. All production men in the industry are aware of undesirable conditions caused by jackets of insufficient hardness such as knurled edges, failure of cutting at the point where the cutting rule crosses indentation from previous jobs, slippage of cutting rule into parallel indentation of previous jobs, undue wearing of cutting rule, paperboard dust, shredding, etc.

In order that the reader may more properly evaluate the material contained herein, it will be necessary at later points in this article to touch upon steel rule dies, cutting and creasing presses, and cutting and creasing jackets. Included in the cutting and creasing operations are diecutting, perforating, punching, scoring, creasing, cut scoring, and all operations utilizing steel cutting and creasing rule; also any type of cutting performed on platen presses, cylinder presses, reciprocal head presses, rotary presses; in short all such operations wherein rule comes in contact with a hard steel surface. Reference to cutting and creasing will include cutting of such material as paper, boxboard, corrugated board, celluloid, asbestos, gaskets, etc.

The objective from the very beginning was to obtain a hard case of 70 Rockwell C backed up with homogenous hardened or tempered material in the neighborhood of 30-40 Rockwell C. This approach was necessitated by the fact that steel plates or jackets heat-treated or cold-worked to such a hardness were not only economically impracticable but also entailed innumerable manufacturing difficulties. Even if such a homogenous material was obtainable, the hardness of 70 Rockwell C through and through would, in the actual cutting and creasing operation, prove too brittle and the jacket or plate would quickly produce an incipient crack and rupture. This is particularly true with sheets to 0.085 in. The Bar-Plate Mfg. Co. has successfully developed a method in collaboration with the Chromium Corporation of America. This method is a new hard surfacing process which hereafter will be referred to as the Bar-Plate Crodon Process, and is primarily a hard chromium case backed up with hardened or tempered steel. Development of this process represents a total of six years of experimentation and testing and has produced for the Folding Box, Corrugated, and Graphic Arts industries, and, generally, wherever diecutting and cutting and creasing occurs, a hardening process applicable to cutting and creasing plates and jackets that would overcome most of these difficulties. The efficiency of this process is in direct ratio to the hardness of the undersurface.

In the early stages of experimentation we encountered many such difficulties as arriving at the appropriate thickness of case, cracking and flaking, and adhesion of counter. With these difficulties overcome, we went through a two-year period of production testing under the severest conditions.

The Bar-Plate Crodon Process produces an extremely hard (metallic) coating, nine-tenths as hard as a diamond. It is an electrolytic process which bonds this hard coating intimately to the base steel. In its production, extensive baths of various chemicals are necessary, for which the size of equipment can be appreciated by pointing out that it must be capable of handling plates which are twice the size of the largest cutting and creasing jackets. (See Fig. 2, in which is shown a Bar-Plate Boxmaker Turnbuckle Jacket with swivel bar for 7/0 Non-converted Miehle Press suspended

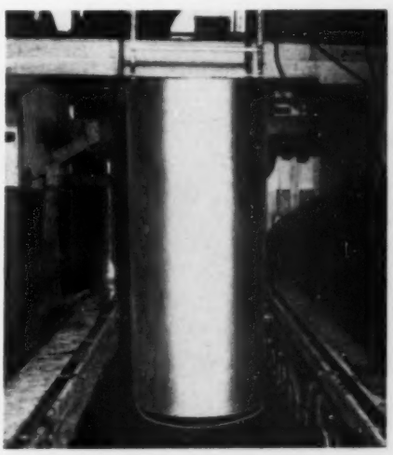


Fig. 2.

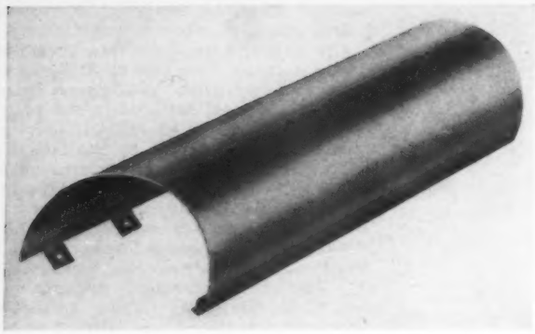


Fig. 3.

over the electrolytic solution.) Exacting controls must be exercised from start through final inspection.

The process is readily applicable to all hardened or tempered jackets and plates, regardless of manufacture, and is best applied to the completely fabricated jacket, *i.e.*, one with the bars attached

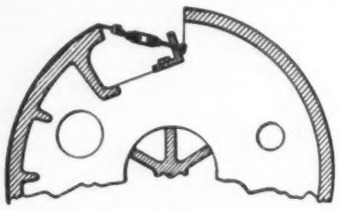


Fig. 4.

and the holes in the jacket drilled and countersunk. Although facilities are available for such processing prior to attachment of bars and drilling and countersinking of holes, yet the easiest approach with a minimum amount of lost time would be to furnish the jackets with bars attached or with the drilling and countersinking already completed. Inasmuch as it is extremely desirable that a jacket be completely fabricated prior to undergoing the Bar-Plate Crodon Process, Bar-Plate has installed facilities for completing this fabrication.

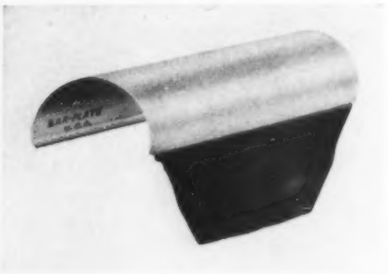


Fig. 5.

Besides jackets, the Bar-Plate Crodon Process can be applied to other items used in the Graphic Arts industry, such as fountain rollers, fountain blades, doctor blades, impression cylinders, bed and cylinder bearers, and other parts that are subjected to wear.

Fig. 6.

Although the standard case utilizing the Bar-Plate Crodon Process is 0.005 in., this can be varied with excellent results from 0.003 in. to 0.008 in. This factor may at first appear unimportant, yet the contrary is true. Many presses are carrying too much makeready underneath their jackets, causing a relatively spongy packing. This condition is undesirable because it causes the makeready to break away after repeated impressions and consequent compression and rupturing of the soft paper underneath the jacket, the results of which are lost production time and quality control. In many instances by adding a 0.005 in. or 0.006 in. case to the jacket, one hanger will be eliminated and a better makeready achieved. This fact indicates that employment of a jacket of the proper thickness will lead to a solid makeready.

It is relevant at this point to state that inasmuch as a hardened or tempered jacket treated with the Bar-Plate Crodon Process is 70 Rockwell C, the jacket surface therefore being harder than the steel cutting rule, the hardness of which varies between 30-60 Rockwell C, the makeready pressman must exercise greater care at arriving at a kiss impression. Normally working to a theoretical standard of 0.004 in., which is exceeded in practice by as much, using the jacket treated with the Crodon Process, he will work to a standard of 0.002 in.

On long runs the cutting produced with a cutting and creasing jacket treated with the Bar-Plate Crodon Process will be consistently good for a much longer period of use. Indentations in a cutting and creasing jacket are the main source of trouble which the Bar-Plate Crodon Process reduces to a minimum.

In the corrugated industry where normally 4 pt. to 6 pt. cutting rule is used, the indentations in the jacket exist to a greater degree than in the folding box industry. This is the case in spite of the fact that in many instances 0.125 in. steel is used instead of 0.085 in. This also exists because of the quick makeready methods used in the industry and lack of specialized cutting and creasing presses. Another factor is that the diecutting of corrugated board is just coming into its own, and the volume of diecutting done by this group nowhere approaches the volume produced in the folding carton industry. Here the Bar-Plate Crodon Process finds a nice application on the long runs, and where the density of the die is quite severe.

Evaluate the Jacket

No one steel jacket will satisfy all all conditions any more than one hardness or thickness of cutting and creasing rule will satisfy all conditions. The

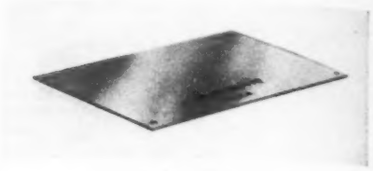


Fig. 7.

industry has advanced far enough in the past 20 years to be selective in qualifying the proper jacket for each job. Each press should be equipped with several different jackets. Each job that goes on the press should be carefully evaluated, and right jackets should be used. What factors come into play in this selection of the proper jacket? First to be considered is the cutting and creasing rule die. Although 2 pt. rule is mainly

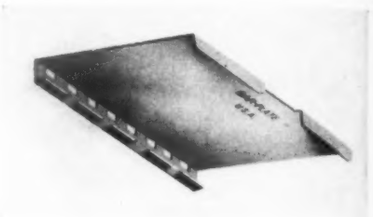


Fig. 8.

consumed in the industry the thickness of the cutting rule will vary from 1 pt. to 6 pts. Factors that determine the thickness of the creasing rule are nature of material to be processed and degree of bend of the rule. When we refer to cutting rule we mean a sharp steel rule (not featheredge) that cuts the sheet. Included in this category is all rule with a cutting edge, including perforating rule. In most cases, these rules are hardened and tempered to a degree consistent with bending qualities and

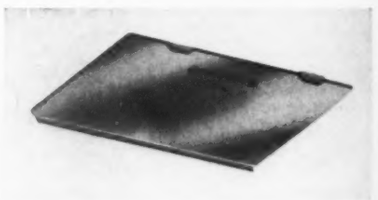


Fig. 9.

workability. Once again although center bevel rule is commonly used in the industry, side-bevel rule is consumed in certain types of diecutting. This too must be evaluated in the final approach to the jacket.

Rule Hardness

Now we come to the hardness of the rule. This will vary from 30 Rockwell C

(Continued on Page 56)

Paper Rolls Moved By Conveyor System

THE Akron (O.) *Beacon-Journal* currently is undergoing an estimated $4 million modernization program which will take more than four years to complete. As part of this program, the paper is revamping its roll handling operations.

Formerly, newsprint arrived at a public warehouse by rail, was unloaded, stored until needed, and then re-loaded onto street trucks to be carried to the newspaper plant where it again was unloaded and taken to the presses.

Under the new system, designed by Wm. Ginsberg Associates, New York, N. Y., engineering consultants, newsprint will be taken directly from incoming railroad cars to storage within the *Beacon-Journal* plant itself, thus eliminating loading and unloading the trucks, the trucking operation and use of public warehouses.

A new building has been erected adjacent to the newspaper's existing building. This addition extends the *Beacon-Journal's* property to a point across the street from a railroad depot.

Tunnel Route Constructed

Before installation of the new system, it was first necessary to obtain permission from the railroad and City of Akron to construct a tunnel leading from the depot and under the street into the *Beacon-Journal*'s plant.

Paper now is unloaded at the rail depot by an industrial lift truck and deposited on the depot-end of a Gifford-Wood conveyor (Fig. 1). The conveyor carrying the paper rolls descends to below street level (Fig. 2). The 23 deg. slope of this drop made it necessary to design lugs on the conveyor which raise to prevent rolls from sliding during the descent. These lugs move into a flush position as the conveyor resumes horizontal travel.

The conveyor moves the paper rolls through a tunnel beneath the street and emerges into a below-street level area of the plant where an automatic, air-actuated kick-off device pushes the rolls off the conveyor (Fig. 3). From this point, the rolls are picked up by an industrial truck with a roll clamping device and taken to storage.

"—Multiple ink feed with . . . wow! wow! whee! . . . automatic shut-off . . ."

Roll Kick-off Device

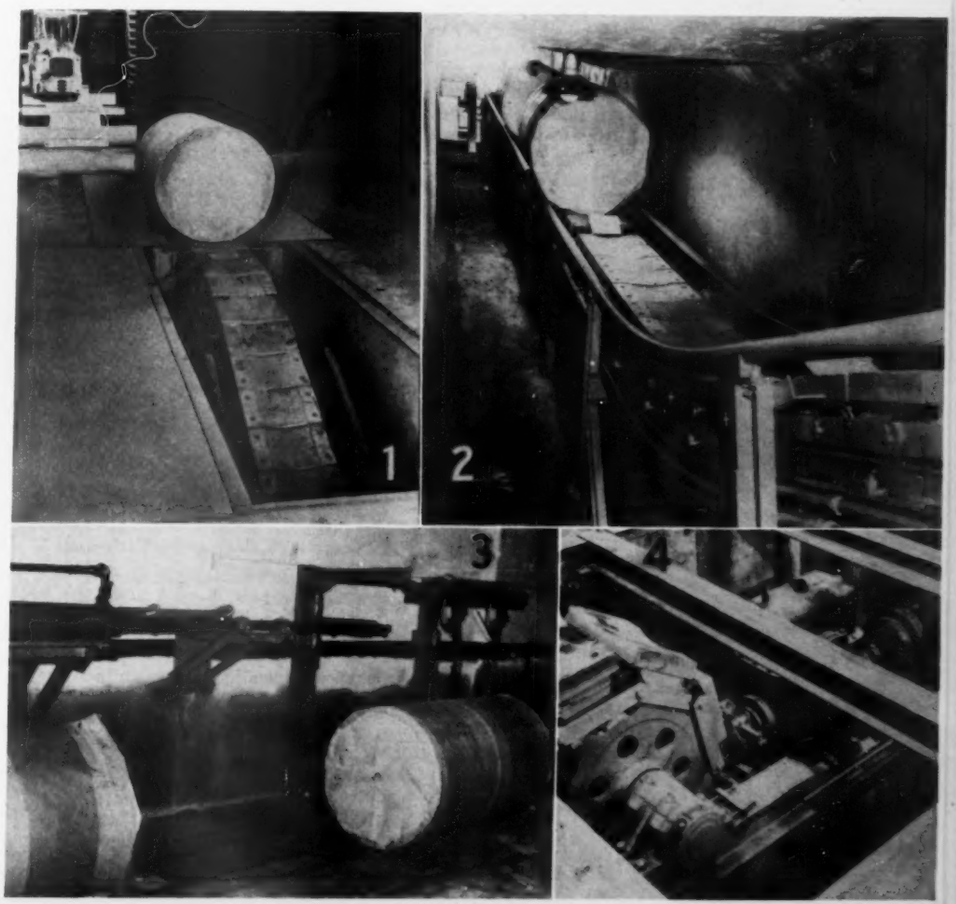
The kick-off device operates when the roll of paper contacts a limit switch. A solenoid valve is energized to activate a pneumatically-motivated piston connected by linkages to the pusher which automatically pushes the rolls off the conveyor.

The Gifford-Wood conveyor is of the slat type, the slats being designed with concaved surfaces for safely accommodating the rolls during transit. Slats are of 18 in. by 11½ in. by 2½ in. thick maple. They are bolted at each end to angle-clips welded to two parallel endless steel chains (12 in. pitch). The chains ride on 20 lb. rails mounted on structural steel supports.

Conveyor's Drive Unit

A fluid coupling between drive motor and gear reducer (Fig. 4) is designed for smooth conveyor operation, provides adjustable speeds ranging from 25 to 50 f.p.m., and enables reverse travel for return of empty cores to the railroad loading platform. The conveyor is stopped and held under load by means of a magnetic brake.

Magnesium plates are provided to cover the pit in which the drive unit is installed and also to cover the depot pit when not in use. Safety railings are provided throughout the tunnel and are to be installed around the depot unloading area.



Paper Rolls Ride Conveyor Beneath Street Into Akron *Beacon-Journal* Plant

1. Paper rolls are moved from rail cars in background by industrial truck to start of Gifford-Wood conveyor on unloading platform at railroad depot.

2. Conveyor as it descends to below street level from unloading platform. Conveyor lugs which raise automatically are used to prevent the rolls from sliding down the 23 deg. slope.

3. Automatic, air-actuated kick-off device which pushes the rolls off the conveyor. The rolls are moved from this point to storage by a fork truck equipped with a roll clamping device.

4. Conveyor drive mechanism comprises 15 h.p. motor connected with reduction gear by fluid coupling. Illustrated also are the magnetic brake, drive sprocket, 12 in. pitch roller chain and maple flights.

Photoengravers

Plan to adopt techniques which will bring about renaissance in letterpress industry—Complete plates on rotary press one of the objectives.

By LOUIS FLADER

THE 58th Annual Convention of the American Photoengravers Association was held in the Jefferson Hotel, St. Louis, Mo., Oct. 11 to 13 inclusive. The convention was attended by over 1000 persons engaged in the photoengraving and related industries. The business program was designed to deal with the most important subjects affecting photoengraving and letterpress printing, and was singularly free from theorizing and based upon practical work-a-day experiences. The Exhibition of Photoengravers' Machinery, Equipment and Materials was larger than usual and was attractively arranged.

The American Photoengravers Association is proud of its achievement in the conduct of its conventions and occupies a top position among trade associations for attracting a remarkable attendance to its conventions. The services rendered to members of the photoengraving industry has become a habit, causing them to attend year after year.

A year ago at the Boston convention it was evident that the Graphic Arts faced the necessity of vital changes. The Boston convention visualized some of these changes and brought them to the attention of photoengravers and letterpress printers as well. During the year considerable progress was made and this was fully reported at the St. Louis convention.

Champ May Lose Title

President D. H. Murnik, in his keynote speech, touched upon vital issues by referring to a remark made one year ago that there were many indications that photoengraving and the Graphic Arts as a whole were approaching new trends. He stated, "If you have watched developments during the past year, you will agree that we are well along the road toward changes. What you will see and hear in this gathering will verify my statement and help you to evaluate the progress made.

"Not many years ago, printed images were fixed on paper from surfaces in relief, intaglio or planographic in character. The advent of photoengraving brought letterpress printing to the fore until it led all other printing methods by a wide margin and for a time stopped lithography in its tracks.

"Today the situation is reversed. Our problem is to check the defection which is progressively shrinking our markets and to find ways and means to keep alive and expand the use of photoengravings, increase our sales volume and give employment to more people.

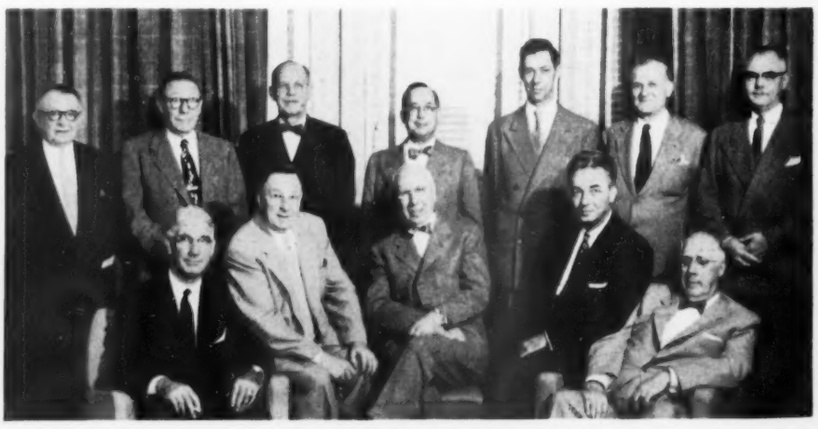
"We are caught in the midst of a war of ideas. The battle is between the old and new ways to achieve the end result—printed products. Reduced to sporting terms, letterpress is the champion—fat, smug and self-satisfied—resting on its laurels of the past; while the challengers, offset and gravure, are in active training doing plenty of roadwork. This condition if maintained can have only one result—the champ will lose the crown and his title."

Photoengravers' Objective

President Murnik further stated "Photoengraving and letterpress printers must map a course of production entailing no more steps and operations than are required in offset and gravure. We must furnish the printer complete plates containing all units in a form that will enable him to save the cost of lockup, justification and makeready. When such complete plates are placed on the cylinder of a rotary press, the speed of the offset press can be matched and surpassed."

Garth Flashes Danger Signals

W. W. Garth, jr., President, Graphic Arts Research Foundation, Inc., Cambridge, Mass., painted a rather dismal picture from which the following are brief extracts: "Photoengraving beyond the next decade will be determined by the future of letterpress printing, by the encroachments that should be expected from lithography principally, and by the advent of new printing processes. It is my belief that within the next 10 years it will be clearly established that letterpress is a comparatively inefficient process. Perhaps it is not illogical for the first discovered printing process to be the first displaced. Whether we consider the immediate 10 years ahead or take a longer view, photoengravers must be more alert to new methods, must be more prepared for change in processes and must be more analytical in finding areas of new



Officers and Executive Committee, 1954-1955, American Photoengravers Assoc.

Seated, left to right: R. C. Walker, First Vice Pres.; C. G. Rohrich, Secy.-Treas.; D. H. Murnik, President; Frank J. Schreiber, Executive Secretary; W. K. James, Second Vice-Pres.

Standing, left to right: C. E. Whitaker, Exec. Committee Member; Louis Flader, Consultant; Charles A. Staley, Exec. Committee Member; Walter V. Stewart, Exec. Committee Member; C. A. Bostwick, Director, Cost, Accounting and Statistical Dept.; Kenneth Cooley, Exec. Committee Member; E. Bartlett Brooks, Exec. Committee Member.

Not Shown: C. A. Mawicke, Exec. Committee Member, and Thomas L. Cooper, Exec. Committee Member.

Panel for Dow Powderless Etching Process—The men shown here composed the panel which answered questions from the floor at the Wednesday, Oct. 13, session of the American Photoengravers Assoc. convention, Hotel Jefferson, St. Louis, Mo. Moderator of the meeting at the microphone was Research Director C. M. Flint, American Newspaper Publishers Assoc., New York. Panel members (left to right): Photoengraving Supt. Henry Arbogast, Milwaukee (Wis.) *Journal;* William Frisch, The Wright Co., Inc., Cambridge, Mass.; Floyd Lear, Industrial Engraving Co., Easton, Pa.; Otis Simpson, McBee Company, Athens, O.; General Mgr. Edward Triebe, Kingsport (Tenn.) *Press.* This session, in all probability, was the most interesting from the standpoint of audience participation ever to have been held at a convention. Moderator Flint and panel members answered questions freely and frankly, many submitted from the floor. While great strides have been made in the process for fast etching of magnesium, it has not yet reached its fullest development.

business than has ever before been necessary."

The speaker then went into considerable detail to demonstrate that his dire prediction was well founded. He reviewed the various adaptations of photoengraving and letterpress printing but did not hold out too much hope. While the majority of those present were in partial or complete disagreement, the speaker's remarks served a useful purpose in flashing danger signals to all photoengravers. The effect of his remarks was like applying spurs to a well fed horse contented to jog along at an easy pace.

Electronic Engraving Progress

J.A.V. Hyatt, Director of Commercial Sales, Fairchild Camera and Instrument Corp., Long Island, N. Y., spoke on *High-Fidelity Engraving Through Electronics.* He outlined the development of the Scan-A-Graver, a machine manufactured by his firm which produces relief printing plates by electronic means. This machine has been on the market for several years and is constantly being improved. While originally only 65 screen plates could be produced in limited size, various screen textures ranging from 65 to 120 lines per in. can be provided.

In the original machine copy could be reproduced only in same size. A new model permits of both enlargement and reduction up or down by four and one-half times. This new model is also capable of distorting the dimensions of the original copy, elongating the picture or reproducing it in shorter form. It is claimed that it will be possible to have complete variable control over the tonal values in the copy, enabling the reproduction to be either higher or lower in tone.

Considerable progress was reported in the production of color plates. In this instance a color scanning device, when perfected, will reproduce the equivalent of color separation photography and from that point on the engraving machine will produce the plates.

Pre-sensitized Plates

Ralph H. Dirats, Development Engineer, J. Dirats & Co., Inc., Westfield, Mass., had for his subject *Pre-Sensitized Plates—A New Era.* Basically, the idea is to pre-coat the metal plates used by photoengravers on both sides of the sheet; one side bearing the light sensitive and acid-resisting emulsion, the other side a plain acid resistant coating. The use of metal treated in that manner will effect considerable savings of time in the engraving plant and provide uniformity and stability not otherwise obtainable.

Plate Processing Without Printing Frame

In addition, his company is ready to market a plate called Camera-speed. This metal plate will carry a photosensitive resist coating, and on top of that a photographic emulsion which will make it possible to put the plate in the camera, expose, develop, reexpose to light without the need of a printing frame, strip off the negative, develop the acid resist top and proceed with etching. This idea is not new, as experiments dating back 40 years or more were made in England which, however, did not meet with success, possibly due to lack of materials and facilities.

Walter Grivna, Production Mgr., Bureau of Engraving, Inc., Minneapolis, Minn., had an interesting subject entitled *Solving Screen Tint Confusion.* He made the point to which all will agree, that it is impossible to convey precise color descriptions and definitions orally or in writing. His firm has produced a number of charts dealing with the entire range of halftone screens in general use in which the various tones are accurately measured and identified percentage-wise. By the use of these charts the customer, artist and engraver can avoid many errors and obtain the desired results with certainty. These charts also show the appearance of both black and white lettering on halftone tints of various density.

Constructing Address

The gloom that was cast over the audience by W. W. Garth, jr., during the first session gradually cleared up in subsequent sessions. One of the most interesting addresses, *Let's Sell Photoengravings,* by Clarence G. Rohrich, president and general manager, The Akron Engraving Co., broke through the fog like a ray of sunshine. The speaker, through his own efforts and in his trading area, has discovered and developed procedures that have expanded his business and enabled him to help letterpress printers to retain their markets. He has used the step-and-repeat method of platemaking to give his printer customers a complete plate containing as many duplications of the original design as may be required, thereby saving them a great deal of time in lockup and makeready; enabling them to maintain perfect register and turn out a far greater volume of better printed sheets than would otherwise be the case.

Cooperation With Letterpress Printer

He exhibited a number of printed results and plates in support of his statements. His discourse was founded upon the basic idea that inasmuch as letterpress printing represents the chief outlet for photoengraving, the photoengraver must serve existent letterpress printers in a way that makes it practical for them to continue to operate their printing presses. He further emphasized an important point that in seeking new markets and new uses for photoengraving, these must be discovered and developed by the engraver. There is little existing demand for many things the photoengraver can do, but a great and growing demand can be created by the photoengraver himself.

New Uses and Adaptations

It was evident that emphasis upon new adaptations and uses of photoengraving

(*Continued on Page 49*)

Phototypography Is Major Topic At ITCA Meeting

By A. G. FEGERT

TYPOGRAPHY by photography was the outstanding topic of discussion during the International Typographic Composition Assoc. convention at Hotel LaSalle, Chicago, Sept. 23-25. Owners of trade typographic plants who have been and are experimenters and successful producers of phototypography shared their knowledge with other owners of plants and interested executives. Some in the audience had already ventured into the phototypesetting business; others were thinking about advisability of venturing; a few just remarked that it was still in the experimental stage —but all were eager to learn what was being shown as evidence of progress achieved.

ITCA's Executive Secy. Frank M. Sherman, who arranged the presentation, mentioned that currently 24 firms in the USA and Canada are operating phototypographic equipment with ingenuity and varying degrees of success.

Men representing manufacturers were among speakers on the program who also were on duty in booths at the trade show, explaining technical workings of their equipment.

Urges Better Hot Metal Composition

One trade typographer, Sol M. Cantor, New York, N. Y., questioned the wisdom of installing phototypographic equipment in a trade plant. He enumerated procedures to improve service of plants like his own to counteract demand for other forms of typography. In his address on *We Must Meet Quality with Quality*, he said: "Not all of us are in a position to invest the necessary energy and money in this new venture. Even if we could, we would be competing with our own costly equipment by duplicating it with the new. The only answer to this problem is in improving the quality of our typographic composition to match and surpass the new methods. We have flexibility and variety on our side to help us." He then suggested improved methods for hot metal typesetting which he employs.

"Third Major Revolution"

In his opening remarks, William F. Trevitt, Toronto, chairman of a panel of three producers of phototypography, described phototypesetting as "the third major revolution in the Graphic Arts." He said: "While there are skeptics who still go on believing this third revolution will merely supplement present methods, there is a growing group which feels that phototypographic methods are destined to have a much wider application than just a mere adjunct to basic conventional methods. Neither I personally, nor the members of this panel, are particularly concerned with which school of thought you are affiliated. Our motives in these particular sessions are the dissemination of pertinent information. Let us all admit at this point that phototypography is not an overnight development and neither is it experimental in the broad sense."

Trevitt referred to factors aiding successful use of the photographic processes in typographic composition. He added that the profit potential from specialized phototypographic methods and camera applications was a reason for venturing into the new form of typography. Continuing, he said: "Type and letter patterns, never meant for other than horizontal or the perpendicular, now seem to have a better chance of attention if they wiggle, giggle, shimmie and shake. If none of these work, you can always use type in perspective."

He averred that "art directors and the brain boys in the agency field drive themselves batty to achieve 'flow' and 'movement' and an occasional 'directional thrust' into almost every job, and layouts can no longer be static."

He stated that the market for the new form to typography included television, slide-films, dimensional presentations, slide-projections, flip charts, multi-purpose sales and personnel training programs. He referred to cartographers, architects, contractors, technical illustrators, the aircraft industry, "and the thousand-and-one other pools having specific word problems—never adequately serviced by the Graphic Arts—all represent the market for phototypography."

He indicated that persons engaged in servicing all phases of advertising production see and wonder at changing patterns of production within the confines of their own plants. They cannot listen to the many photomechanical terms used without developing a deeper appreciation for the polished piece of glass represented by the camera lens.

Mr. Trevitt said in starting phototypographic service, he discovered it more to his advantage to find "a comp in Alley 5 who is a camera-but, and just loves to spend his off-hours in a makeshift darkroom" and teach him to be a photographer, than to try to train a camera man all the tricks of typography. He acknowledged that the training of personnel for phototypographic operations "all takes time—and is damned expensive."

Mr. Trevitt revealed his firm does not use outside salesmen but depends upon what he called inplant group visits to acquaint possible buyers with the nature of their proposition. These visitors include art directors, advertising production managers, and creative men connected with agencies, art studios, printers and lithographers. Supplementing this method of sales promotion, illustrative literature is used to publicize the firm's offer of phototypographic service.

In a subsequent presentation by means of projected images from slides on the screen, Mr. Trevitt showed how type faces and forms can be made to "wiggle, giggle, shimmie and shake" from traditional horizontal and perpendicular settings. Specimens showed the original settings, and derivatives reproportioned into narrowed or expanded shapes without losing artistic qualities; into elongated or compressed, skinny and fat variations; curves, up, down, and across or in combination; solid or outlined letters; positive or negative films;—all of which demonstrated the acrobatic qualities of phototypographic flexibility and adaptability.

Utility of Phototypography

Hubert J. Echelle, St. Louis, speaking on *Design is the Basis of Phototypography*, declared it is a new business and must be put on a production basis to pay. He indicated that men who enter it take

(*Continued on Page 53*)

Mr. and Mrs. ITCA Have Happiest Moment — Frank M. Sherman, veteran secretary and founder of ITCA was presented with a Buick 1954 Roadster and a coupon book good for 5512 gal. of gasoline as a gift from the membership of the association—founded in that same ballroom of Hotel LaSalle 35 years ago. Previous to the presentation, Mr. Sherman was surprised by a feature on the program consisting of a This is Your Life demonstration. Voices from Sherman's past were first heard of persons who had influenced his life, and then the persons in the flesh stepped on the stage after Frank had been given the opportunity to identify the voices. The master of ceremonies, Claude Kirchner, officiated and also presented Frank with the keys to the gift automobile and the oversized "ITCA Oil Co." coupon book (largest ever issued) calling for the gasoline. Mrs. Sherman was also presented with gifts, including a picture of her favorite pin-up boy, a Gruen wrist watch and a bunch of red roses.

Individual Responsibility Cannot Be Negated By Terminology Changes

By JOHN L. FOY*

**Business Mgr., Miami (Fla.) Daily News. Abstracted from address delivered before convention of the Intl. Stereotypers and Electrotypers Union, Sept. 1954, Miami Beach, Fla.*

AS YOU know, there has been considerable stimulation of improved production methods and materials utilization in most other industries. It began with the stress of wartime requirements. Basic changes in newspaper operations have been negligible. It is true that there have been refinements in processing and some improvements in the flow of our product from one department to another.

It is now imperative that you, as well as we, recognize the forcefulness of the competitive factor of television in general, and the imminent change to color television. We must all appreciate the fact that newspapers as a medium are also in a changing economy and must be competitive with other media. These changes and other mechanistic shifts in our economy mean that Utopia has not arrived. We cannot, therefore, meet every demand which some shortsighted people wish us to recognize. The failure to produce technological changes in our business over the past 30 years has denied us economies characteristic in the progress of other industries.

I have been told repeatedly by my employers that one of their basic concepts is that: "We like to have our people feel they are part of the team. What is good and healthy for our business is good for them."

Over a long period of time as owners and publishers of successful newspaper enterprises, they have seen some 400 daily newspapers disappear in the last 25 years —that is not good for any of us.

One of the peculiarities of life today, which has a rather damning effect on our particular industry, is the tendency to use one or more organizations to which we belong for the intellectually lazy purpose of hiding behind group morality. This to me appears to be a most vicious type of collectivism and is certainly not conducive to individual morality. This dope injection in our lives is not confined to any particular strata of society, nor particular organization, whether such exists with or without formal purpose.

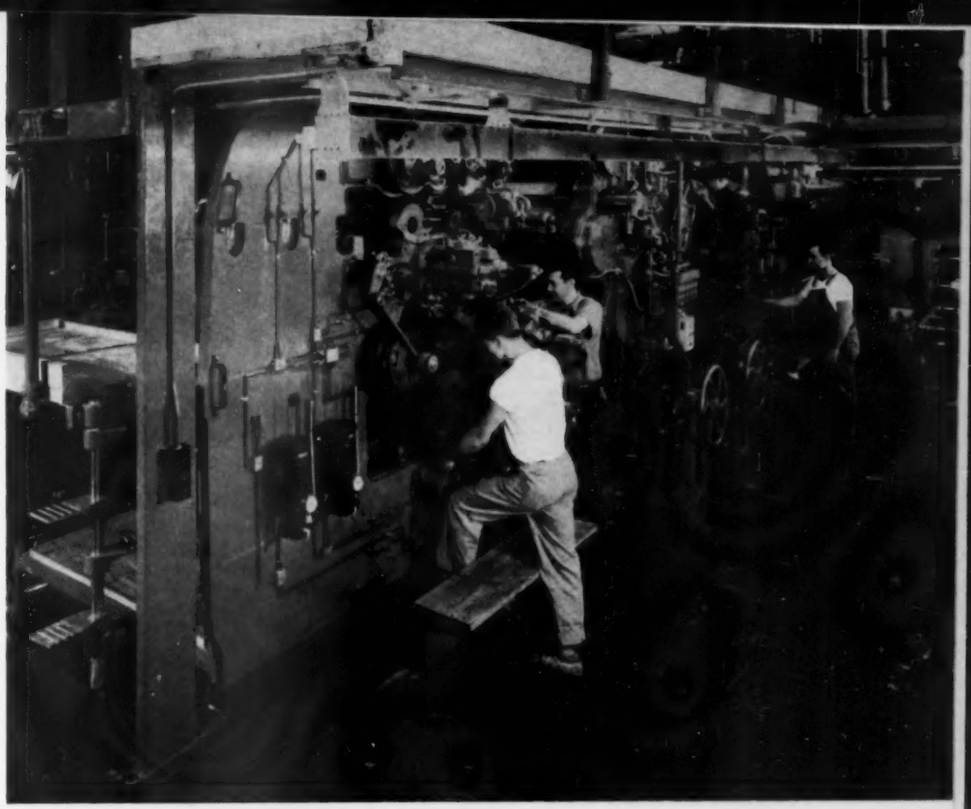
When we all wake up, we will realize that individual responsibility as a fundamental tenet of moral philosophy can be shaken, but cannot be destroyed.

Beginning with the Molly McGuires, which, as most of you know, were subsequently eliminated because of lack of sound moral principles, trade unionism in the United States was based on the concept of the dignity of man. This automatically called for improved standards of living and a fair share of this world's goods.

Dignity of the individual and individual responsibility cannot be negated through simple changes in terminology. By that I mean, some profound thinkers of the day see fit to shift the basic terminology to a group expression which they now characterize as the dignity of labor. What they mean rather is the dignity of man, whether a child, housewife, laborer, craftsman, business or professional man.

Inasmuch as mergers of a corporate nature are considered dangerous if they threaten to freeze any part of our economy, we can hardly be consistent if we accept merging of individuals into an inanimate thing of our own creation which, in turn, will freeze our individuality and eliminate individual responsibility.

We have failed miserably in the field of technology. At the same time the newspaper industry has been in the forefront in sociological advances. To carry these gains of the past years it is essential that our industry become current with production advances comparable with the national industrial pattern. Methods and facilities for our gross national product are the strongest and healthiest in existence. We must bring about similar good health for our own industry and products. These changes will become necessary for our own welfare.



Five-color Double-ender Press — Shown above is a press crew at McCall Corporation, Dayton, O., preparing its recently installed Cottrell five color double-ender press for operation. The press is designed to print five colors on one side of the web, which is fed through an oven, dried, turned over to the other side, and run back through the five color printing units for printing on the reverse side. The web passes again through the oven, is dried, folded and delivered from the press. The largest steam drum drier in the McCall plant is attached to this press. The press is designed especially to enable weekly publications, such as *U. S. News* and *Newsweek*, to feature up-to-the-minute cover material. The crew for this press is identified, from left to right, as follows: Jack Overlea, Flyboy; Briscoe Burrell, Second Asst.; Russell Fleming, First Asst.; and Everett Jackson, Pressman.

Rapid Roller's New Branch — In order to provide service to customers in the Eastern part of the country, the Rapid Roller Co. has opened an Eastern Branch Office. The office will be under the direction of A. D. Kirkpatrick.

BOOKS

Point of Purchase Cardboard Displays

A WELL illustrated, instructional-type manual for the planning, construction and production of point of purchase cardboard displays has been prepared by Victor Strauss. Comprised of 218 pages under the title of *Point of Purchase Cardboard Displays*, it includes 147 specimens of these displays. Among them are baskets and toppers, dispensing units, flashers and motorized displays, complete window sets, paper sculptures and numerous other types.

The examples of point of purchase displays presented in the manual are intended to serve as an aid for selecting the right kind of display. Strauss explains that the growth of the point of purchase field has created a need for an encyclopedic work of this kind.

He has divided the contents into four main parts and devoted a separate section to what he calls the Displayman's Dictionary. Much of this display printing is done by offset, silk screen and collotype which are discussed by the author in the part entitled *The Plant*. Strauss explains that this part is not written for the specialist actively engaged in one of the many fields, but for the layman who

knows very little about the mechanics of production.

Another part of the book is headed *The Blackboard.* This section contains visuals of all kinds of displays. The section entitled *The Drafting Board* deals with the production and construction of point of purchase displays. Information on all recurring elements of construction of displays is included in the part called *The Notebook.*

Point of Purchase Cardboard Displays—by Victor Strauss. Book consists of 218 pages; 867 illustrations; size 8¼ in. by 10¾ in.; green cloth cover. May be ordered from *Printing Equipment Engineer,* 1276 W. Third St., Cleveland 13, Ohio. Price, $15 per copy postpaid. Because of narrow handling margin, please send remittance with order.

Plant Lighting Bulletin

AS PART of the services rendered, the Research and Engineering Council has presented to members copies of the Illuminating Engineering Society bulletin, *American Standard Practice for Industrial Lighting.* The bulletin consists of 42 pages with cover and is well illustrated. Proper lighting for printing and all other plants in any way associated with the Graphic Arts industry is an extremely important science. Along the line of proper lighting contained within the bulletin are data for industry in general and a goodly portion for Graphic Arts industrial lighting. Lighting is discussed and defined with respect to principles, kinds of lighting, seeing tasks and illumination values.

In an accompanying memo to R&E Council members, President John H. Davis, jr. states that a committee from both the Council and the Illuminating Engineering Society is vigorously organizing task committees to develop technical data along the lines of the general information contained in the bulletin, but for specific use in printing.

The current bulletin distributed to members is a distinct step in the right direction regarding this important subject affecting Graphic Arts plant production and the proper amount of light for production workers, including office workers.

We are glad to note that the Council continues to promote activities which are considered of value to members.

Phototypesetting Economics to Follow Evolutionary Course

The economics of phototypesetting and the whole photographic process, together with their technical and practical applicability, will gradually become more clear over the next few years. A few printers pioneering in the field have already determined certain areas of work within which phototypesetting is practical and others within which it is not—based upon available equipment and processes. With the new phototypesetting process devices, those pioneers and others will develop new and further facts upon which additional evaluations and estimates of potential can be based. Present indications are that phototypesetting will follow a normal course of evolution over a period of years, and ultimately find its proper place in the graphic arts industry along with the metal composing machines. — Summer 1954 issue, *Paper & Print,* London, Eng.

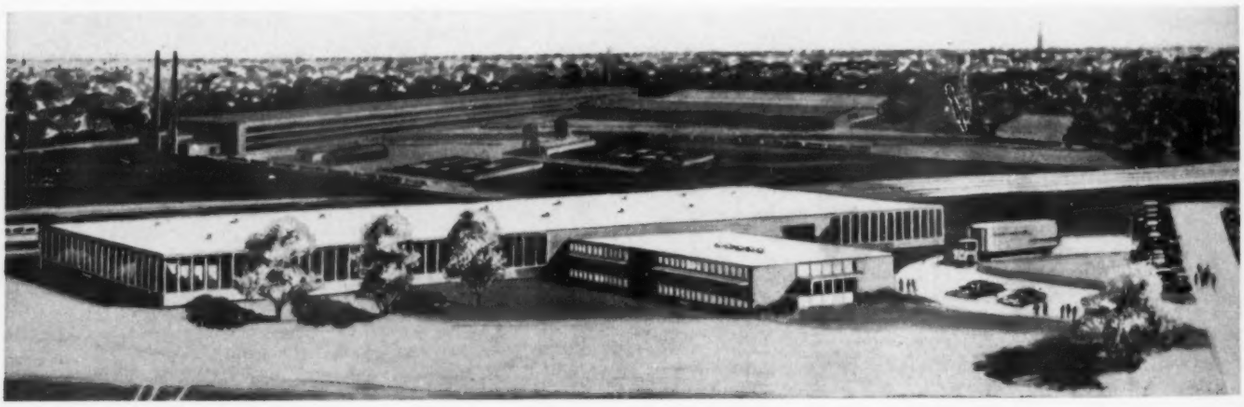
Thomas J. Willey, 41, died Sept. 23. Willey was plant manager for Ideal Roller & Mfg. Co. at Huntington Park, Calif.

Plastic Ink Roller

A plastic ink roller for letterpress printing has been patented by Reinhold G. Kupfer of Brooklyn, N. Y., according to a recent New York (N.Y.) *Times* article. The roller is made of vinyl plastic. To overcome the problem of bonding the plastic directly to the metal core of the roller, Kupfer first wraps the core with a layer of steel wool and then applies the soft, elastic material around it. Patent No. 2,689,395 covers this construction.

Advance Own Interests

One of the prime requisites of those engaged in the Graphic Arts industry is that companies serving their customers and their fellows in the industry itself should advertise their products and/or services. The Intl. Typographic Composition Assoc. as an organization and through Executive Secy. Frank M. Sherman has made it easier for its members to promote its company members' interests. This is being done by a series of 12 mailing cards, each of different design. Each card is 5 in. by 8 in., one for each month in the year. The cards are printed in black and a different color ink for each month. The message on each card also is different and pertains to the typesetting services and usefulness of each ITCA member firm. The illustration on each card is novel, having been resurrected from the long ago and having been given a modern twist in the accompanying text. The ITCA is to be congratulated upon encouraging its own members to avail itself of this series of cards for promotional purposes. When an ITCA member orders a quantity of the cards through Secretary Sherman, his company name address and phone number are imprinted in proper place.



Feather Operations to Have New Plant — Construction is scheduled to soon get underway of an estimated $525 thousand building near Cleveland to house the printing operations of the William Feather Co., according to announcement by William Feather, jr., General Mgr. The one story building of 60,000 sq. ft. will be located on a 5½ A. site in Brooklyn Village, about 5 mi. from the center of Cleveland. The building itself will be of cement block and brick construction, and fluorescent lighting will be used throughout. A shipping and receiving dock will be completely sheltered from the weather. Railroad facilities will be provided by location of the plant along the main line of the New York Central.

The Feather company, employing 215 persons, operates art, composition, photoengraving, press and bindery departments. The company produces advertising material in the form of catalogs, folders, books and broadsides. William Feather, who founded the firm in 1916, has relinquished the managerial reins in favor of his son, William, jr., and is now devoting his time exclusively to writing and editing syndicated house organs.

Since 1951, Feather has purchased Central Engraving Co., Caxton Company and Corday & Gross Co., all of Cleveland. Central Engraving has been consolidated with the Feather operations, while Caxton and Corday & Gross are operated as subsidiaries.

Fishing for greater composing-room efficiency?

There's a LINOTYPE to meet your particular needs

With a complete line of single-distributor and mixer machines, and unequalled typographic resources, Linotype is best prepared to help you select the machine or combination of machines for maximum efficiency and economy of operation.

Here are Linotype's six single-distributor models. For setting a lot of big heads and display, the Rangemaster Model 33 gives you more and bigger type from the main keyboard than any other single-distributor machine. Rangemaster 34 gives you auxiliary capacity for the bigger sizes. Both models feature the exclusive Two-Speed Assembler which lets you keyboard the smallest or the largest types with equal ease.

When you need a machine of standard range that expands with your needs, the Model 31 is available with one to four magazines which can be added as you need them. Model 31 sets sizes through normal 18-pt. and condensed 24-pt. Model 32 is available with auxiliaries for setting up to condensed 60-pt.

If you produce consistently from just one magazine, or if your work calls for a wide variety of type faces requiring numerous magazine changes, Model 5 is the answer. And, if you require volume production of straight matter, there's the high-speed Comet—in a class by itself.

Get in touch with your Linotype Production Engineer. He'll be glad to analyze your operations and help you decide which Linotype is best for you.

The new Linotype Hydraquadder saves time and money setting quadded lines. Available on new machines or for installation on Linotypes in your plant.

Type Sizes From 5 pt. to Condensed 48 pt.
Can Be Set on Model 33 Rangemasters

5△46 Corona with Erbar Bold
HOW is one to assess and evaluate a type face in terms of its esthet
HOW is one to assess and evaluate a type face in terms of its esthet

48△15 Erbar Bold Condensed
HOW IS ONE TO

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LEADERSHIP THROUGH RESEARCH

Set in Linotype Electra and Spartan families

Three views of a truck developed by Engraving and Maintenance Dept. employees at the Miami (Fla.) *Herald* for safe handling of drums containing nitric acid. (1.) The container is being fastened to the truck by means of a belly band. (2.) By tilting the truck, the drum is now in upright position in the device and ready for safe movement to any location. (3.) The acid being poured from the container with the truck supported by a floor leg and lower end of the long frame element. Pouring rate of the liquid is regulated by a handle. Construction details of the truck are described in the accompanying article.

Nitric Acid Drums Are Handled Safely

Safety-conscious employees in printing plants frequently exercise ingenuity to improve handling and processing methods. An example of this involved the handling of large drums of nitric acid in the Engraving Dept. of the Miami (Fla.) *Herald*. The truck, which is shown in three positions in the accompanying illustrations, permits safe movement of the bulky acid containers from one location to another. It is designed also for effortless pouring which can be a tedious and hazardous operation in some instances. Knowledge of the effects of acid on the skin and on a number of manufactured materials has taught workers to treat this chemical with respect.

The drum device was designed and built as a community development by employees of the Engraving and Maintenance Depts. Engraving Supt. at the *Herald* is Kenneth T. Brouse. The device is constructed from 1¼ in. black iron pipe and painted after assembly. It is mounted on two 3 in. caster wheels. All-welded construction is used throughout.

In Fig. 1, Engraver Ralph Chumbley is shown attaching the truck's belly band around the center part of a drum. This band holds the drum in fixed position during transit and when tilted for removal of the acid. The band is welded to 6 in. hinges which in turn are fastened to spindles with a 2 in. overhang on each side for balance purposes. Inside diameter of the belly band measures 16¾ in. The band itself is made of ¼ in. by 2½ in. black iron. A ½ in. by 3 in. screw is used for tightening the band to hold the drum securely.

Chumbley is shown in Fig. 2 with the drum of acid lifted off the floor and secured safely in the device, ready for transport. Total length of the long frame element, which the operator is holding, is 42 in. It should be noted that the handles may be made longer than on the device shown, if desired. Inside width of this frame element is 19¼ in.

The device is in pouring position in Fig. 3. The rate of flow is controlled easily by means of the 15 in. long handle. The measurements of the floor leg at left are 19¼ in. by 20 in. The distance from the pivot center for the drum to the end of the lower section of the long frame element is 16 in.

Alkali Dispersible Resinous Adhesives

(By M. S. KANTROWITZ, Chairman, Research Committee, Washington (D. C.) Club of Printing House Craftsmen, Inc.)

(This is a condensed version of Report to the Research and Engineering Council concerning *Alkali Dispersible Resinous Adhesives*, currently distributed to Council members, the Printing Industry of America, and the Waste Paper Utilization Council.)

The use of waste paper is one of the greatest of forest conservation measures. Therefore, waste paper should not be considered as a waste product, but rather as a secondary source of cellulose fiber, so valuable that many paper manufacturers depend upon it as a raw material.

Non-alkali dispersible material employed either in the manufacture of the paper or in its subsequent use operations have always been a problem with paper mills in the deinking process of converting waste paper into pulp. This problem has become increasingly difficult in recent years with the introduction of plastics, latex, and other compounds in adhesives.

When books, magazines, or other printed matter are bound with adhesives possessing non-dispersion properties, they cannot be utilized by the paper industry for repulping since the non-dispersible resins resist the alkali reaction in the deinking process. The paper made from such repulped waste stock contains numerous rubber-like spots which are detrimental to the appearance and printing quality.

The Government Printing Office recently developed alkali dispersible resinous adhesives, the formulas of which are as follows:

FORMULA B-24
Green Padding Compound (Flexible)

	Percent
Polyvinyl Acetate Emulsion (alkali dispersible type)*	92.2
Plasticizer**	7.4
Naphthalene Green Dye (12% solution)	.4
Water (sufficient to thin out as required for best working consistency)	
Total	100.0

FORMULA B-25
White Resinous Adhesive

	Percent
Polyvinyl Acetate Emulsion (alkali dispersible type)*	95.0
Plasticizer**	5.0
Water (sufficient to thin out as required for best working consistency)	
Total	100.0

*National Starch Products Resyn 16K01 or equal, or Shawinigan Products Corporation Gelva C-3 or equal.
**Hexylene Glycol.

Speedflex Press Demonstration—Lyle Dutro (in white shirt) of Orville Dutro & Son, Inc., is shown demonstrating the Speedflex Model C press to an interested group at the recent Dutro-Western Gear press seminar held at the Lynwood, Calif., plant of Western Gear Works. It was reported that nearly 1000 printing plant executives were in attendance for the two week session. Ten models of rotary rubber plate printing presses were demonstrated. The printing of a tabloid newspaper in different colors and including halftones, was part of the demonstration.

EVERY PRINTER... EVERY TYPOGRAPHER

knows that brand new type cuts makeready cost, moulds better electrotypes, furnishes perfect repros with ease and profit. 'Monotype' users can now have an unlimited supply of brand new type by taking advantage of Lanston Monotype Corporation's new matrix rental plan. There are no restrictions... display matrices of all available 'Monotype' type faces are now included in the library—broadening the use of your 'Monotype' Display Caster, Thompson or Giant Caster. Rental terms are modest... you pay only for the time matrices are in your shop. A complete listing of available sizes and series is in preparation.

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261 Madison Avenue, New York City, New York

Set in 'Monotype' Bembo. The wood-engraving is by John De Pol.

The name 'Monotype' is a registered U.S. trade-mark.

Your Saw is Your Machine Shop

MODEL G-4

Think of the many sawing operations that must be done on your saw. They include — squaring and notching plates, inside mortising, sawing angles, mitering borders, sawing spacing material, rule and slugs.

That's just like machining parts in a machine shop, they all have to be right in order to fit together.

For accurate and fast lockups get a Hammond Glider TrimOsaw.

"THE SAW WITH THE BALLBEARING TABLE"

Hammond Machinery Builders INC

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Patents

For The GRAPHIC ARTS

Covering patents issued August 3, 10, 17, 24 and 31.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

COMPOSING ROOM EQUIPMENT:

2,685,959. SLUG-TRIMMING KNIFE FOR LINE CASTING MACHINES has a pair of oppositely disposed trimming blades, the blades defining a diverging slug ejection path. The type-slugs are forced past the cutting edges of the blades along the ejection path. An arrangement is formed on the body of one of the blades at a point beyond the cutting edges of the blades in the direction of movement of the type-slug to deflect and cant the slug during its passage between the blades. This reduces the amount that the other of the blades trims the trailing portion of the slug. Thereby a type-slug of the same thickness throughout is produced. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corporation, Brooklyn, N. Y. Application Apr. 4, 1951, 4 Claims.

2,686,037. PRINTER'S QUOIN LOCK, for a quoin having an elongated body of channel form, is in the form of an elongated wedge against inner side of the web of the channel and is mounted for longitudinal movement between flanges of the channel. A second wedge is mounted for and held to the transverse movements away from or toward first wedge, and has a shallow slot in its upper side, transversely of the length of the wedge, in which a lock bolt of thin metal is slidably mounted. The bolt at its inner end has a projection adapted to enter between spaced teeth of a rack in first wedge in one position and to be clear of rack in another position. A detent extending upwardly from between ends of the bolt passes through the upper flange and has a horizontal extension bearing against the upper side of upper flange. Invented by Elmer Mason Foote, Elmira, N. Y. and Freeman Barney, Spring Lake, Mich. Assigned to The Challenge Machinery Co., Grand Haven, Mich. Application Oct. 22, 1951. 2 Claims.

2,686,680. RAM OPERATING MECHANISM FOR COMPOSING MACHINES includes a ram and a ram lever adapted to reciprocate the ram. The driving arrangement for the lever comprises a driving lever movable toward and from the ram lever. The driving lever is rocked to vary the distance between the point of engagement between the driving lever and the ram lever and the fulcrum of the ram lever. Invented by Merritt G. Stewart and Chester A. Macomie, Chicago, Ill. Assigned, by direct and mesne assignments, to Patent Development Corp., Chicago, Ill. Application Oct. 29, 1949. 20 Claims.

2,687,210. DELAY MECHANISM FOR TAPE CONTROLLED APPARATUS uses a repeat character and function delay mechanism for controlling the operation of linecasting and composing machines. The mechanism embodies record reading facilities which include a set of tape reading elements. Selectable instrumentalities are employed which are responsive to consecutive identical codes to interpose a time delay factor, and comprise an idle tape reading cycle between each of the consecutive codes. Invented by Frank Martindell, Chicago, Ill. Assigned, by mesne assignments, to Teletypesetter Corporation, Chicago, Ill. Application Dec. 30, 1952. 11 Claims.

FEEDING, FOLDING, DELIVERY:

2,685,446. SHEET REGISTERING APPARATUS features a device by which the front plate and the front and side lays, against which the front edges of sheets are registered, are adjustable as a unit in a direction toward and away from the machine or angularly in the plane of the plate. The front plate is fixed to a supporting frame by means of a releasable screw fastener and permits bodily and angular movements of the plate in its own plane. Two pivoted eccentrics are mounted at each side of the plate for eccentric rotation in a slot extending in a direction cross-wise of the plate whereby rotation of the eccentric moves the associated side of the plate with the front and side lays as a unit in the direction toward the printing machine. Independent rotation of the eccentrics may be effected manually by a key or handle. Invented by Headley Townsend Backhouse, Sunningdale, England. Unassigned. Application Nov. 9, 1949. 5 Claims.

2,687,301. DEVICE FOR HANDLING PRINTED SHEETS at the accumulation end of a printing press is for protecting the freshly printed sheets from smearing and offset. The device includes a support for the sheets, vertical guides for engaging the sheets, a pusher for pushing the sheets laterally from the guides, and a pair of belts located to receive the sheets between them and to contact the side edges of the sheets when the sheets are pushed from the guides. The belts are spaced from each other less than the width of the sheets so that the pusher causes the sheets to assume an arcuate configuration whereby they are stiffened. The support is moved forwardly in the direction in which the sheets are pushed by a distance for each sheet at least equal to the thickness of same to successively arrange sheets between the belts out of destructive surface contact with each other. The belts are carried on reels and paid out under controlled tension. Invented by Walter E. Scoy and Brainard E. Scoy, Middletown, O., and Joseph Kramer, Reading, O. Assigned to The Gardner Board and Carton Co., Middletown, O. Application May 24, 1949. 16 Claims.

MISCELLANEOUS:

2,685,157. MACHINE FOR WRAPPING ARTICLES AND CONTROL THEREFOR operates automatically upon stacks of loose sheets of paper or books, so that wrapping paper is drawn tightly and sealed around each stack even though there may be variations in thicknesses. The electrical and pneumatic controls of the feed and cut-off of the present wrapping machine are simplified and improved. Invented by Wallace A. Doepel and Robert F. Wiley, Toledo, O. Assigned to Lynch Corporation, Anderson, Ind. Application July 9, 1949. 9 Claims.

2,686,217. TESTING DEVICE is for use in checking the operation of telegraphic tape decoding devices for use on Teletypesetters to operate Linotype machines. It is useful in checking out and adjusting the sensing heads and the control units employing telegraphic perforated tapes, and may be rapidly set to correspond to any function which may be coded on a particular tape. Invented by Alfred L. Prince, Providence, R. I. Assigned to Research Corporation, New York, N. Y. Application Aug. 6, 1953. 5 Claims.

PLATEMAKING:

2,685,129. METHOD FOR MAKING ARCUATE PRINTING PLATES so as to secure relief indicia printing shells together to form a cylinder for receiving centrifugally applied molten backing material to the inside of the cylinder comprises bending one marginal edge of one of the sheets back upon itself to form a hook flange extending to the rear of face of the sheet, and bending one marginal edge of the other sheet back upon itself to form a hook flange extending over the face of the sheet. The two hook flanges are interlocked for holding the two sheets from moving away from each other during the casting process and for sealing the two marginal edges against leakage of molten backing material until the material has solidified. Invented by Robert R. Myers, Jr., Des Moines, Ia. Unassigned. Application Nov. 19, 1949. 1 Claim.

2,685,136. GAUGE DEVICE FOR CHECKING DIMENSIONS OF PRINTING PLATES of flat or curved shape provides for holding the usual leveled edges of a plate in a manner simulating the actual conditions as they are held by the clamping mechanism of the printing press. Use of the gauge eliminates inaccurate registration of a printing plate or plates on the pages being printed, the buckling of plates in the press, the insecure locking of plates on the press, and imperfect printing from a plate improperly held in the press. The gauge comprises a rod support rectangular in cross section with opposed clamping jaws between which a plate is clamped. Any variation from a predetermined dimension is indicated on the dial of a comparator gauge. Invented by Arnold L. Imshaugh, West Springfield, Mass. Unassigned. Application July 26, 1952. 3 Claims.

2,685,510. SENSITIVE PHOTOGRAPHIC ELEMENT FOR USE IN THE SILK SCREEN PROCESS has a cellulosic support which is coated with a silver halide gelatin emulsion of photographic printing paper speed. Optical sensitizers may be added. On this layer, a second layer of the same composition but containing dispersed colloidal silver is applied. Both emulsion layers contain a dispersion of a tanning developing agent, such as 4-phenyl catechol. Invented by Edward C. Yackel, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application Nov. 14, 1951. 3 Claims.

2,685,511. METAL REINFORCED CELLULOSE ESTER PHOTOLITHOGRAPHIC PRINTING PLATES consist of an aluminum foil and a coated layer of cellulose triacetate bonded together with an interlayer made up of a resinous interpolymer of vinyl chloride, vinyl acetate and alpha, beta ethylenically unsaturated dicarboxylic acid. The cellulose triacetate layer contains an antihalation dye and has a hydrolyzed stratum on its outer surface sensitized with an agent selected from the class consisting of oxidants for cellulose to the alkali-soluble state in the presence of light. The outer surface of foil is also covered with a layer of the said resinous interpolymer. Invented by Gale F. Nadeau and Clemens B. Starck, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application May 3, 1952. 12 Claims.

2,686,552. APPARATUS FOR BONDING LAMINAE OF LAMINATED PRINTING PLATES comprises a curved saddle for supporting a number of plate laminations. A lid for the saddle has a flexible diaphragm secured so as to form a fluid-tight chamber. Electrically actuated valve arrangements control the introduction of fluid into the chamber. A fluid pressure actuated motor moves the lid toward and away from the saddle. An electrically controlled timing mechanism operates the motor control valves and the fluid introduction control valves in sequence. Invented by Harry W. Faeber, Larchmont, N. Y., and George N. Sandor, Mamaroneck, N. Y. Assigned to Time, Incorporated, New York, N. Y. Application Feb. 15, 1950. 16 Claims.

2,687,345. ETCHING COMPOSITION FOR LITHOGRAPHIC PLATES is particularly for etching chromium and is adapted for use in the preparation of offset printing of bimetal lithographic plates having a chromium surface coated with gelatin or gum arabic. Composition comprises hydrochloric acid in an amount to etch chromium, calcium chloride in an amount of at least 80% to inhibit attack of the resist by hydrochloric acid and an aliphatic polyhydric alcohol having 2-4 carbon atoms in an amount of at least 5% to prevent crystallization of calcium chloride at etching temperature. Invented by Margaret H. Murray, Stamford, Conn. Assigned, by mesne assignments, to Printing Developments, Inc., New York, N. Y. Application Nov. 22, 1950. 2 Claims.

2,687,373. PROCESS FOR THE PRODUCTION OF A METAL OFFSET PRINTING PLATE, in which the plate is made of aluminum, provides for treating and adapting the plate for use in an offset printing process by electrolytically treating the surface with an alternating current of low voltage to obtain a porous aluminum oxide surface layer. The plate is then treated with an ammonium hydroxide solution to neutralize residual acid present and the thus neutralized plate is treated with a volatile organic solvent dispersion of magnesium oxide to close the pores of the aluminum oxide surface layer by deposition of the magnesium oxide after which the volatile solvent is evaporated. Invented by Willy Hering, Mettlach, France. Assigned to Cris Trust, Vaduz, Liechtenstein. Application Aug. 21, 1948. 4 Claims.

2,687,762. APPARATUS FOR CURVING PRINTING ELEMENTS is for curving relief printing plates of the type formed in a flat sheet to the curvature of the printing cylinder. The machine accomplishes the desired curving operation effectively while maintaining the areas of the printing surface in a desired condition of registration so that when the laminated plate is completed, it will be formed to register precisely with the printing cylinder. Invented by Harry W. Faeber, Larchmont, N. Y., and George N. Sandor, Mamaroneck, N. Y. Assigned to Time Incorporated, New York, N. Y. Application May 17, 1950. 3 Claims.

2,687,949. METHOD AND MATERIAL FOR MAKING OVERLAY MASK on a base sheet of transparent or translucent material is for use in the production of relief halftone and lithographic plates from art copy having tone and other areas. The method includes the steps of applying to the base sheet a surface exposed layer of a color-changeable substance, distinguishing between tone and other areas of the art copy by inclusion on one of the areas of a color-altering substance chemically reactive with the color-changeable substance in the presence of activating moisture to effect a change of color, moistening the surface layer of color-changeable substance, and placing the base sheet upon art copy with color-changeable substance in contact with the said areas. Invented by Walter S. Marx, jr., Santa Barbara, Calif. Assigned to Printing Arts Research Laboratories, Inc. Santa Barbara, Calif. Application Mar. 16, 1949. 18 Claims.

2,687,958. LIGHT-SENSITIVE LAYERS FOR THE PRINTING INDUSTRY are useful in the manufacture of printing plates. The layers comprise a base and a light sensitive layer on the base. The layer includes a polyacrylamide in which both hydrogen atoms of the NH_2 group are substituted by alkyl radicals and an azido compound which is an alkali salt of 4,4'-diazidostilbene-2-2'— disulfonic acid. The production of printing plates for gravure, planographic and offset printing as well as for application in intaglio printing are within the scope of the invention. Invented by Wilhelm Neugebauer, Wiesbaden-Biebrich, Germany. Assigned, by mesne assignments, to Azoplate Corporation, Summit, N. J. Application May 10, 1950; in Germany, May 14, 1949. 5 Claims.

PRINTING PRESSES:

2,685,802. VARIABLE DRIVE MECHANISM, for use in printing presses, comprises an endless slack flexible belt connecting two rotary shafts. Idlers engage like sides of the belt along its opposite spans, and are mounted for movement in unison transversely of the spans during operation of the drive so as to transfer adjusted amounts of the slack in the flexible belt between the two spans. This transfer of slack advances or retards one of the rotary shafts with respect to the other and hence variably adjusts their relative timing. Invented by Charles L. Ricards, South Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application June 27, 1950. 1 Claim.

2,686,453. MEANS FOR CHECKING SUPERPOSED IMPRESSIONS ON A MOVING WEB is effected by means of a viewing apparatus with which an observer may view a reflected image of any selected portion of a design formed by a plurality of superposed printed impressions on a web or scan the entire design at any selected rate of speed with no jiggling in the reflected image of such design, regardless of the area being viewed. The device takes the form of an elongated drum extending across a moving web and containing mirrors so positioned to form a polygon. Movement of the drum is effected by a gear transmission of the worm gear type driven by a Selsyn motor which is connected any synchronized with the motor driving the printed web, which causes the mirrors to receive and reflect the impressions on the moving web. Invented by John J. Bogert, Fairlawn, N. J. Assigned to National Laboratories. Mfg. Corp., Corporation of New Jersey. Application Aug. 1, 1950. 5 Claims.

2,687,089. HIGH-SPEED PRINTING PRESS FOR PRINTING OF DIFFERENT COLORS has a printing cylinder and a main form, and a sub-form is movably inserted in main form and occupies the level of and a level below that of the main form. At least one ink fountain is attached at an end of sub-form below level of sub-form. An ink-roller is swingably supported to normally extend above sub-form and is displaceable to latter ac as to be received by ink fountain. An operating device displaces the ink-roller

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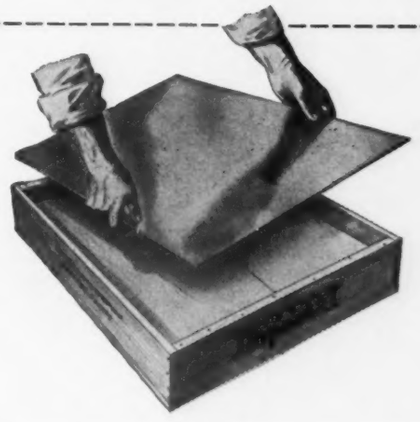

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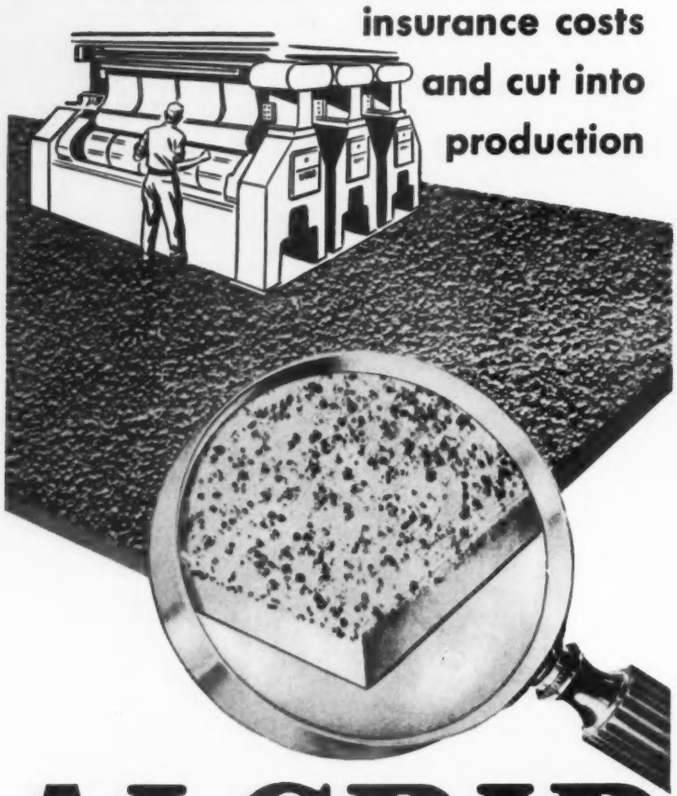

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to transverse over sub-form and past said end thereof. The device includes an oscillatable guide supporting ink-roller and to which ink-roller is relatively movable to enter fountain upon leaving sub-form. Invented by Gunter Nelki, Hamburg, Ger. Assigned to Frederick D. Lowell, Chicago, Ill. Application May 25, 1951. 7 Claims.

2,687,300. MACHINE FOR HANDLING CARDS AND THE LIKE is for use in connection with a printing mechanism. The machine employs a finger mechanism to push the lower edge of the leading card into engagement with the printing roller. Invented by Albert C. Chew, New York, N. Y. Assigned to Hobson-Miller Machinery, Inc., New York, N. Y. Application Apr. 16, 1952. 4 Claims.

2,687,886. REGISTERING APPARATUS FOR PRINTING MACHINES uses a conveyor for advancing a sheet toward the printing rolls of a printing press. A retractable stop is interposed between the conveyor and the rolls. Separable upper and lower feed rolls are interposed between the conveyor and the printing rolls, one of which is driven for controlling the advance of the sheet from the stop to printing rolls. One of the rolls is mounted on a bracket for retraction. The feed rolls in sheet engaging position have their rotational axes disposed in spaced horizontal planes. An adjustable mount on the bracket holds rotational axis of one feed roll when in sheet-engaging position at an acute angle to a vertical plane through rotational axis of the other feed roll to effect accurate register of the sheets. Invented by Alphonse W. Pitner, Philadelphia, Pa. Unassigned. Application Oct. 21, 1950. 3 Claims.

REPORTS - SEARCHES - MARKETING - PATENT ATTORNEY - INVENTION - PATENTS

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Munsey Bldg., Washington, D.C.

Paper Roll Handling Film

Ways of handling paper rolls during transport and in movement to and from storage areas are depicted in an 8 min. film now available from Clark Equipment Co. Entitled *Chiseling Costs*, the film includes a description of the use of a chisel plate attachment for a forklift truck. The device is employed for speeding up removal of paper rolls from boxcars and transporting them to storage areas, and occasionally is used in tiering and detiering operations. Information on this film may be obtained by writing Industrial Truck Div., Clark Equipment Co., Battle Creek, Mich.

NEWS ITEMS

H. L. Bonnell has been appointed by Vulcan Rubber Products, Inc., as sales representative for offset printing blankets. Bonnell's territory will include Middle Atlantic area primarily for metal decoration accounts and paper lithography firms. Bonnell will also serve as technical adviser on lithography problems.

Two Retire at Miller's—Edmund Scherer and Mike Repasky of Miller Printing Machinery Co. retired recently. Scherer, with the company 38 years, worked in assembly of ink fountains; Repasky, a 40 year man, was engaged in the final assembly of saw trimmers.

New Harris-Seybold Directors were elected to the board of directors at the company's recent annual meeting of shareholders. They are Ren R. Perry, vice president of sales, Harris-Seybold Co., and George C. Houck, vice president of operations. After the meeting, directors elected Pres. George S. Dively to the additional post of chairman of the board and Houck to the new position of vice president and general manager. Perry was promoted from the field sales organization in 1949 to become general sales manager and was elected vice president of sales in 1952. Dively, who has been president of Harris-Seybold since 1947, now holds the joint title, chairman of the board and president. Former Board Chairman R. Verne Mitchell, who recently relinquished a number of his corporate responsibilities due to ill health, has been elected honorary board chairman. Houck was assistant to Dively for seven years before being elected vice president of operations in 1952. In the fiscal year ended June 30, Harris-Seybold's consolidated net shipments increased about 15% above previous years, with a greater proportion of Graphic Arts equipment in relation to defense products. During the year the number of shareholders increased 38% to more than 1900.

PERRY DIVELY HOUCK

A Live Exhibition — The Tenth International Printing Machinery & Allied Trades Exhibition will be held at Olympia, London, England, July 5 to 16 inclusive. Wherever possible machines will be running under production conditions. Hundreds of machines, ranging from giant presses to small job presses, will be in action. All of Olympia's floor space covering nearly 500 thousand sq. ft. will be in use, all under one roof. Olympia is easily accessible — only a few minutes from Piccadilly Circus.

Tipmaster Representative — Pierce Specialized Equipment Co. has announced that William G. Welsh has taken on the distribution of the Tipmaster Glue Tipper in the Cleveland area. Welsh has been sales representative for I.B.M. and Marchant Calculators, and is now in business for himself as a manufacturers' representative.

WELSH

Interchemical Appointment — Dr. Zeno Wicks has been appointed general manager of Interchemical Corporation's central research laboratories in New York, according to announcement by Vice Pres. Norman S. Cassel. Dr. Wicks joined Interchemical in 1944.

VANCATA

Joseph Vancata has been appointed vice president in charge of sales by Robertson Photomechanix, Inc. Vancata has been associated with Robertson for over 20 years and was formerly assistant to the president.

New G-E Plant Manager — Harold C. Jenseth has been appointed plant manager of General Electric's Distribution Assemblies Department, San Francisco, according to C. K. Skinner, the Department's manager of manufacturing. Jenseth was born in Petersburg, Alaska, edu-

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cated in Seattle schools and graduated from Univ. of Washington with a B.S. deg. in mechanical engineering.

RICHARDSON

C. F. Richardson has joined the Miller Printing Machinery Co. as a sales representative, according to an announcement by A. E. Searle, jr., vice president in charge of sales. He will represent the company in northern Ohio.

Klatte Retires — J. Arthur Klatte, Pressroom Superintendent of the Grit Pub. Co., Williamsport, Pa., retired from active duty Nov. 1. He was associated with Grit Pub. Co. for over 51 years. Three years were spent in the mailing room, and 48 years of Klatte's employment were devoted to pressroom activities. During the past 11½ years he was pressroom superintendent. Klatte is looking forward to the free time now available to him for the accomplishment of several objectives he has had in mind for some time. He has been succeeded as pressroom superintendent by August Kauffman.

Heidelberg Western Sales Co. held the first public showing of the 21 in. by 28 in. Original Heidelberg Cylinder press at its Los Angeles plant recently. Invitations to view the one-color single revolution press were extended to all printers and other members of the graphic arts industry in Southern California.

New President for Smith — Henry F. Brayer has been named president and general manager of the John P. Smith Co. by the firm's board of directors. A graduate of the Carnegie Institute of Technology, Brayer has been with the John P. Smith Co. for 30 years, and was executive vice president for 9 years. Other officers re-elected are: Vice Pres. R. Mervyn Briggs, and Treas. Charles W. O'Brien.

BRAYER

Art Gravure Staff Changes—The Board of Directors of Art Gravure Corp., New York, N. Y., has announced changes in its executive staff. C. Philip Barber, Vice Pres., Newspaper Sales Div., will also assume the duties of Director of Sales and Chairman of the Executive Operating Committee. William A. Pedersen, who for the last two years has been assistant sales manager of the Commercial Div. and prior to that time the production manager, has been named Sales Mgr. of the Commercial Div., succeeding the late Clifford R. Noble.

News-Trib Wins Prize — First prize for typography and makeup was awarded to the LaSalle (Ill.) *Daily News-Tribune* recently by the Illinois Press association, at its annual meeting in Decatur. Presentation was by Lloyd Pflederer, chairman of the 1954 newspaper contest. The first place plaque was received at Decatur by Floyd Esche, managing editor. The *News-Tribune* is a new member of the Illinois Press association.

The Howard Flint Ink Co. announces election of John F. Devine as vice president. Pres. Edgar B. Flint stated Devine will supervise sales promotion and contact national accounts, his headquarters being in New York, N. Y. Devine joined Fuch & Lang Mfg. Co. in 1914 and was made general manager of F&L after being in charge of manufacturing, sales and research development. Devine is a member of LTF Facilities Committee. He was a director of National Printing Ink Research Institute and director and vice president of National Assoc. of Printing Ink Makers.

DEVINE

New Midwestern Parts and Supply Warehouse — A service designed to minimize waiting time for parts and accessory replacement orders for Mid West and Far West customers was set in motion on Oct. 1 by Lanston Monotype Corp. A

CORNER CUTTERS . . . STAMPING-EMBOSSING
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CRAMACO CORNER CUTTERS with every wanted feature. The rigid adjustable guides and automatic paper clamp insure perfect cutting. Pedestal mounted model (illustrated above) $175 . . . bench model only $110.

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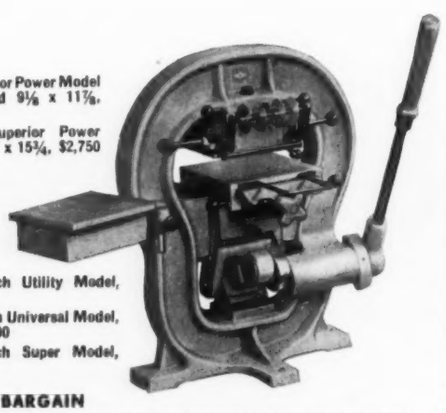
CRAMACO Junior Power Model Embosser, Head 9⅛ x 11⅞, $2,000
CRAMACO Superior Power Model, Head 11 x 15¾, $2,750



CRAMACO Bench Utility Model, 6 x 8, $650.00
CRAMACO Bench Universal Model, 7⅞ x 10⅜, $700.00
CRAMACO Bench Super Model, 9 x 12, $750.00

SPECIAL BARGAIN

1—R. HOE & CO., INC. SPECIAL SINGLE ROLL 2-UNIT ROTARY WEB TELEGRAPH BLANK PERFECTING PRESS—NO. 1697—STRAIGHT LINE—SINGLE DECK—72" WIDE PLATE CYLINDERS—12 PLATES WIDE X 6 PLATES AROUND, PRINTING 72 BLANKS ON 2 SIDES—72" X 58" CUTOFF.

1—R. HOE & CO., SPECIAL SINGLE ROLL SINGLE UNIT ROTARY TELEGRAPH BLANK PRINTING PRESS—NO. 2029—STRAIGHT LINE—SINGLE DECK—WIDE PLATE 54" CYLINDER, 9 PLATES WIDE X 6 PLATES AROUND—PRINTING 54 BLANKS ON 1 SIDE ONLY SHEET DELIVERY SIZE 52" X 48" CUTOFF.

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parts and supply inventory for all Monotype and Photo-mechanical equipment is being maintained at 216 W. Jackson Blvd., Chicago, Ill. Customers in areas serviced by the Chicago District are requested to send orders for replacement parts direct to the Mid Western Parts and Supply Div. and thus eliminate time formerly lost in re-routing orders from Chicago to the main factory in Philadelphia.

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Assoc. — 1955 Conv., Waldorf-Astoria Hotel, New York, N. Y., Oct. 10-12. Pres., D. H. Murnik, Oakland National Engraving & Gravure Co., 307 Tenth St., Oakland 7, Calif.; Exec. Secy., Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1955 Conf., Edgewater Beach Hotel, Chicago, June 6, 7, 8. Chairman of the Committee, Joseph E. McMullen, Prod. Mgr., Milwaukee (Wis.) *Journal;* Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1955 Conf., The Greenbrier, White Sulphur Springs, W. Va., Oct. 13-15. Pres., Joseph F. Wesol, Robert O. Law Co., 2100 N. Natchez Ave., Chicago 35; Secy., Miss A .G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1955 Conf., Netherland-Plaza Hotel, Cincinnati, Aug. 6. Pres., Howard Keefe, Sales Representative, Cincinnati Lithographing Co., 4318 Duneden Ave., Cincinnati 36; Secy.-Treas., Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives — 1954 Meeting, Hotel Statler, Detroit, Nov. 13, 14. Pres., Richard A. Stout, Printing Industry of Atlanta, Inc., 881 Piedmont Ave., N.E., Atlanta, Ga.; Secy., Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wisc.

Gravure Technical Assoc.—1955 Annual Meeting, Drake Hotel, Chicago, Ill., Feb. 2, 3, 4. Pres. John E. Hazel, New York *Daily News,* 700 Pacific St., Brooklyn 17; Secy.-Treas., Frank Sportelli, International Color Gravure, Inc., 39 W. 60th St., New York 23, N. Y.; Secy., Edward S. St. John, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf. — 1955 Conf., Sheraton-Cadillac Hotel, Detroit, Mich., Jan. 16, 17, 18. Pres., Frank Dassori, Pressroom Supt., Detroit *Times;* Secy.-Treas., Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. — 1955 Conf., Leland Hotel, Aurora, Ill., Sept. 24, 25. Pres., John Rausch, Aurora (Ill.) *Beacon-News;* Secy.-Treas., Wilbur Augspurger, Peoria Journal-Star, Inc., 119 So. Madison St., Peoria 2, Ill.

Intl. Assoc. Electrotypers & Stereotypers —1955 Conf., Shoreham Hotel, Washington, D. C., Oct. 19-22. Pres., Carl N. Becker, Becker Electrotype Co., 144 N. Water St., Milwaukee 2, Wis.; Exec. Secy., A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen 1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Pres., Thomas P. Mahoney, also Vice Pres., Regensteiner Corporation, 310 Racine Ave., Chicago 7; Exec. Secy., Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Conv. Chairman, Lee Augustine, also Vice Pres., The Printing Machinery Co., 436 Commercial Sq., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc.—1955 Conv., Carnegie Institute of Technology, Pittsburgh, Pa. the first week in July. Pres., Kenneth R. Burchard, Asst. Dean, School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.; Exec. Secy., Samuel M. Burt, 719 Fifteenth St. N. W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild — 1955 Conv., Netherland Plaza Hotel, Cincinnati, O., Aug. 7-10. Pres., Lee Augustine, Vice Pres., Printing Machinery Co., 436 Commercial Sq., Cincinnati 2, O.; Secy., Damon Moore (Miehle Rep.), 1513 Corinth St., Dallas, Tex.

Intl. Typographic Composition Assoc. — 1955 Conf., Hotel Ambassador, Los

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Angeles, Calif., March 25, 26. Pres., Harold L. McGirr, Morris & Walsh Typesetting Co., Inc., 129 Lafayette St., New York, N. Y.; Frank M. Sherman, Exec. Dir., 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—Secy.-Treas., Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf. — 1955 Conv., Town House Hotel, Kansas City, Kan., Sept. 10, 11. Kansas Pres., Ozzie Willard, Parsons (Kan.) *Sun;* Kansas Secy.-Treas., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Missouri Pres., Norman Hetherington, St. Joseph (Mo.) *Newspress* and *Gazette;* Missouri Secy.-Treas., William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc.—1955 Conv., Lake Placid Club, Lake Placid, N. Y., June 20-24. Pres., Carl R. Schmidt, Pres., Schmidt Lithograph Co., 461 Second St., San Francisco 7, Calif.; Exec. Dir., W. Floyd Maxwell, 420 Lexington Ave., New York 17 N. Y.

Mid-Atlantic Mechanical Conf. — 1955 Conf., Ambassador Hotel, Atlantic City N. J., March 17, 18, 19. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc Conf. Dir., Theodore A. Serrill, PNPA General Mgr., 304 Telegraph Bldg., Harrisburg, Pa.

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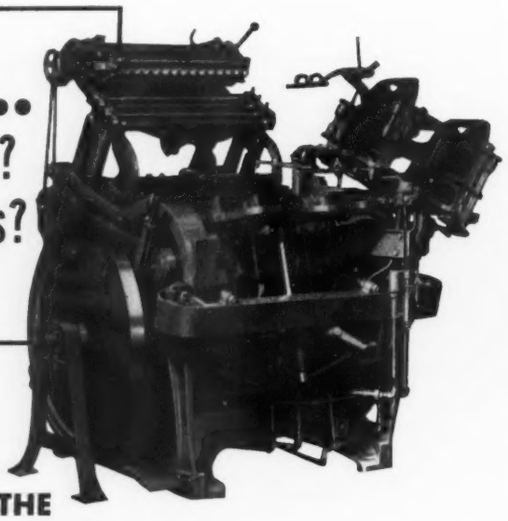

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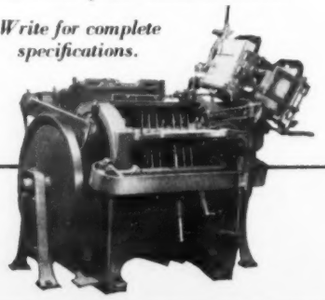

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National Assoc. of Litho Clubs — 1955 Conv. Milwaukee, Wis., May 5-7 (hotel to be announced later). Pres., Jack Blades, Washington, D. C.; Exec. Secy., Frank Mortimer, U. S. Government, Printing Office, Washington, D. C.

National Assoc. of Photo-Lithographers—1955 Conf., Hotel Statler, Cleveland, O., Sept. 21-24. Pres. Rex G. Howard, Howard Co., Peoria, Ill.; Exec. Vice Pres., Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Pres., Richard B. Tullis, Pres. Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa.; Secy., James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1955 Meeting, Conrad Hilton Hotel, Chicago, Oct. 17-21. Gen. Chairman, Peter J. Bernard, Dir. of Personnel and Safety, H. Wolff Book Mfg. Co., 508 W. 26th St., New York 1, N. Y.; Staff Rep., James D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — Secy.-Treas., Walter C. Crighton, Comp Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—1955 Conf., Hotel Ten Eyck, Albany, N. Y., Jan. 29, 30. Pres., Floyd Laurenty, Schenectady (N. Y.) *Union-Star;* Secy., Walter E. Lewis, Asst. Supt., Schenectady *Union-Star.*

Northwest Mechanical Conf.—1955 Conv., Hotel St. Paul, St. Paul, Minn. Feb. 19-21. Pres., William Bensen, Pressroom Foreman, St. Paul (Minn.) *Pioneer Press* and *Dispatch;* Secy., Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minn.; Chairman Supplier Committee, Roy Gydesen, Mgr., Samuel Bingham's Son Mfg. Co., 900 So. Third St., Minn.

Pacific Mechanical Conf. — 1955 Conv., Sheraton-Palace Hotel, San Francisco, Calif., Sept. 9-11. Pres., Gordon Dixon, San Rafael (Calif.) *Independent-Journal.* Secy., Edward Maggi, Phillips & Van Orden Co., 870 Brannan St., San Francisco, Calif.

Printing Industry of America—1954 Conf., Hotel Statler, Detroit, Mich., Nov. 15-19. Pres., James J. Rudisill, Rudisill & Co., Lancaster, Pa.; Gen. Mgr., James R. Brackett, 719 Fifteenth St., N. W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1955 Meeting, Parker House, Boston, Mass., May 11, 12, 13. Pres., John H. Davis, jr., also Vice Pres. and Secy., Judd & Detweiler, Inc., Florida Ave. and Eckington Pl., N. E., Washington 2, D. C.; Managing Dir., Robert E. Rossell, 719 Fifteenth St., N. W., Washington 5, D. C.

Rocky Mountain Mechanical Conf.—Pres., Emory Cross, Scottsbluff (Nebr.) *Star-Herald.* Sponsored by Colorado Press Assoc.

Screen Process Printing Assoc. — Exec. Secy., Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1955 Conf., tentatively set for Hotel Roanoke, Roanoke, Va., Aug. 22, 23. Conf. Chairman, Boyce Brogden, Knoxville (Ky.) *News-Sentinel;* Secy., Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.— 1955 Conf., Adolphus Hotel, Dallas, Tex., March 6-8. Conf. Chairman, Roscoe Ammonette, Marshall (Tex.) *News-Messenger;* Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman, Supplymen's Committee, Eddie P. Gaughan, New England Fibre Blanket Co., 1225 S. Trenton Ave., Tulsa 10, Okla.

Technical Assoc. of the Graphic Arts — 1955 Conv., Somerset Hotel, Boston, Mass., May 9, 10, 11. Pres., G. L. Erikson, Braden-Sutphin Ink Co., 3800 Chester Ave., Cleveland 14; Secy.-Treas., George S. Hammer, 8 Cherry St., Marblehead, Mass.; Convention Chairman, Merrill Friend, Technical Director, Spaulding Moss Co., 113 Franklin St., Boston 10, Mass.

Photoengravers

(Continued from Page 35)

was the theme of the convention. Vice Pres. Theodore Hommel, Unitronics, Inc., St. Louis, a subsidiary of the Universal Match Corp., who has done a great deal of research and produced both processes and machines for specialty printing, spoke on the subject of *Methods For Cylinder Engraving for Letterpress Rotary Printing—An Added Avenue for the Photoengraver*. Hommel did not confine himself to conventional methods and materials, but mapped out a route of his own which resulted in producing printing plates for a variety of uses; some etched flat, others in cylindrical form, utilizing a variety of metals, including steel. His remarks were informative and as the Unitronics plant is located in a suburb of St. Louis, an invitation was extended to those who wished to see the various operations described.

Precise Dimension Plates

Another interesting and important presentation was made by President Robert VanderKloot, Magplate Corporation, Detroit. His subject was *New Developments in Precision Magnesium Printing Plates*. His firm produces magnesium plates of precise dimensions with tolerances of 0.001 in. or less. The photoengraver etches plates containing the complete form, both type and illustrations; and after etching, curves them to the exact dimensions of any rotary press plate cylinder. This does away with lockup, justification, etc., and eliminates practically all makeready. By this method the printing is done direct from plate to paper. Mr. VanderKloot said in part:

"I am sure you will agree that there is a strange irony in the history of photoengraving and the letterpress industry. Photoengraving, one of the greatest inventions of all time, eliminated handwork in the making of relief printing plates and was instrumental in developing the entire printing industry as it is known today. The photoengraving industry worked for years to solve technical and productive problems only to have its close relations—offset and gravure—step in and make use of these advances and give hard competition to the very industry that gave them their start. It is ironical that just when the photoengraving and letterpress industry reached its greatest state of perfection and efficiency, these newer industries began to make their greatest inroads into our business.

"Letterpress has a high cost compared with competitive processes. It has the intermediate step of electrotyping coming between originals and the press which competitive processes do not have. Letterpress printing machinery does not deliver as many sheets per hour as competitive presses. Letterpress has high expenses in lock-up and makeup time. Letterpress has expensive makeready time whose costs must be figured into jobs."

In reality, Mr. VanderKloot and his associates are expanding the basic idea brought forth by Bruce Wale over 15 years ago. He, however, approached the problem from a somewhat different angle. He invented a small, extremely fast running rotary press, which printed direct from plate to paper. He proposed the use of thin metal plates, approx. 0.030 in. thick, upon which the entire form was etched to a depth of about 0.010 in. It was generally believed at the time that such a shallow plate would not answer the purpose as the bottoms would print up. Practice, however, disproved that theory. The reason for this was quite simple. The impression cylinder was at the bottom, the plate cylinder on top,

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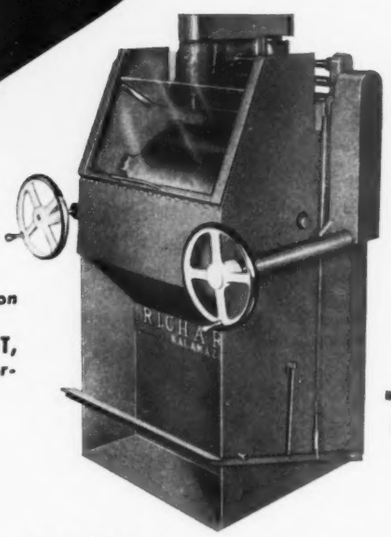

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with the sheet riding in between the two. With that arrangement and hard cylinder packing, it was impossible to print the bottom of the plate.

Curves Magnesium Plates Irrespective of Thickness

VanderKloot applies this principle to large production presses and uses thicker gauge metal for platemaking, since by his system he can curve plates regardless of thickness to an exact fit on the cylinder, whatever their size. The plates being made on magnesium metal are light and this constitutes another advantage, since with light plates, greater press speed can be obtained. This method is a distinct forward step.

Packaging Industry Seeks Engraver Cooperation

The packaging industry in the printing field; namely, those who fabricate packages of every description, is one of the fastest growing of all, and since those who are engaged in package production print on a great variety of paper stock, most of it not generally encountered in commercial printing, peculiar problems arise and must be solved. These include the manufacture of printing plates. Edward F. Gereke, President, Gereke-Allen Carton Co., Chicago, addressed the convention on the subject *Help Us Minimize Our Photoengraving Problems* and outlined these problems as they affect platemaking in an understanding manner. He presented a pamphlet containing specifications for art work and photoengravings used in letterpress printing for folding cartons, this having been prepared by joint committees representing the Folding Paper Box Assoc. of America and the American Photoengravers Assoc. These specifications are in printed form and are circulated to all photoengraving establishments in the United States.

Commercial Dry Offset Progress

Dry offset platemaking and printing has had the attention of many persons and firms in the Graphic Arts field and has been investigated by the American Photoengravers Assoc. for the past two years. It was one of the chief subjects before the Boston convention a year ago. Since then, considerable headway has been made and Warren G. Buhler, Research Engineer, American Type Founders, Inc., Elizabeth, N. J., had for his subject *The Mechanics of Dry Offset.* Several years ago when his firm decided to organize a definite research project on Dry Offset, little accurate information was available. The dry offset production of that day was generally slanted to meet certain needs and very little authentic literature on the subject was available. Buhler stated that after about a year and

Must Embrace Time-Saving Methods and Practices

By Louis Flader

THE St. Louis Photoengravers Convention definitely is a milestone in the renaissance of the Letterpress Printing Industry and its component parts. Some of the age-old practices and equipment will go into the discard. Basic changes will be gradual and slow, but will be accelerated and gain momentum as time goes on. If printing from relief plates on typographic presses is to endure, it must embrace time-saving methods and practices common in rival processes and produce printing surfaces that contain all elements—type and illustrations—in one unit, which when put on the press, either flatbed or rotary, will require practically no makeready to bring about even impressions and will possess wearing qualities to last to the end of the run.

What is needed in the duplication of relief printing plates is a molding and casting process that is accurate, dimensionally stable, the plates light in weight and capable of long wear.

Some of these items are already in the course of development and others more or less in the dream stage. The future of letterpress printing is definitely tied in with the nature of the printing surfaces. To hold their place in the sun, photoengravers must keep letterpress printers in that same position.

Photoengraving 75 years ago sparked the Graphic Arts into its greatest era of development and expansion. Although viewed with skepticism and alarm, because of its revolutionary character, it did succeed in expanding a static industry into one of the largest and most important in our nation. Printing today accounts for most of the distribution of our national production, amounting to more than $300 billion per year. Photoengraving is destined to once more bring about new methods and practices that will enable printing to keep pace with the progress made in all industries.

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a half of concentrated efforts and after many trials and tribulations, it is possible to reveal to the industry how to print by the dry offset method. This will be done through a printed report which will be ready for distribution shortly.

In order to give dry offset the impetus it required, it was necessary to build presses suitable for the process. There are approximately 550 of these machines in use at the present time. Buhler's remarks throughout were intensely interesting and revealing to both photoengravers and printers engaging in dry offset production. Dry offset for general application is in its infancy and it remains for the photoengravers, printers, roller makers and ink makers to collaborate in all efforts to bring dry offset to perfection. Dry offset contains many possibilities, and perfection will only be reached through experience.

Necessity for Speed Brought Dry Offset to Firm

The next speaker, Sales Mgr. E. W. Thomas, Speaker-Hines Printing Co., Detroit and Lansing, Mich., affixed a provocative title to his presentation, *Dry Offset—Three Years' Work and Twenty Million Impressions, or Engravers By Default.* Thomas simply related his experience with dry offset without theorizing, prophesying or painting rosy pictures of its future. He stated his firm got into dry offset because it had a rather peculiar problem and did not venture into the uncharted ground from a purely experimental point of view, but simply to solve its problem.

The problem, as he put it, can be summed up in a single word—speed—speed everywhere down the line from platemaking to printing. The firm had no engraving department, therefore the first experiments began with the printing press. It was decided that offset printing presses would answer the purpose and therefore advantage was taken of their speed. The job in sight was a long run operation, therefore a natural for rotary impressions, but carrying with it at the same time the bugaboo of plate instability found in conventional offset.

Finally, a photoengraver was found and experiments were made in magnesium plate production for dry offset printing. Eventually, this resulted in the construction of a cylindrical etching machine. As the plates required were of large size, additional equipment had to be built consisting of a printing frame, burning-in stove, etc. In due time the platemaking problems were solved and an offset perfecting machine capable of printing 4500 sheets an hour, both sides, or a total of 9000 im. per hr., was purchased. Thomas' address was not only revealing but also inspirational. It demonstrated what could be done by people who want to do it.

Dow Powderless Etching

The Dow powderless etching process was thoroughly discussed after a panel presentation, the moderator being Research Director C. M. Flint, American Newspaper Publishers Assoc., New York, N. Y. Panel members were Floyd Lear, Industrial Engraving Co., Easton, Pa.; Edward Triebe, Kingsport Press, Kingsport, Tenn.; Otis Simpson, McBee Co., Athens, O.; Henry W. Arbogast, Milwaukee (Wis.) *Journal*; William Frisch, The Wright Co., Inc., Cambridge, Mass. These men, each a top-ranking specialist in his line, all had actual experience with the Dow Powderless Etching Process and each related experiences in his particular line of production, no two being exactly alike. It may well be said that these men knew about all that is known about the Dow Powderless Etching Process.

The American Newspaper Publishers Assoc. Research Dept., under the direction of C. M. Flint, initiated its efforts along this line prior to 1949. Its effort was to provide newspaper publishers with better quality and lower cost methods of producing both editorial halftone plates and advertising material. The Perry-Higgins Process of 1948 was a forerunner of the whole program. Its objective was printing from magnesium engravings which had been prepared for the use of justifying typewriters and similar equipment. The program was further spurred by the introduction of electronic engraving equipment.

The ANPA invited the Dow Chemical Co. to join in this research. The process as it is now known is the result.

Not Yet Reached Fullest Development

The Dow Powderless Etching Process has made great strides, although it has not yet reached its fullest development. This will be achieved in due time when craftsmen become more familiar with the process and its application. It is entirely within reason to expect that it will eventually be a routine matter to produce magnesium plates of every character, including line work, halftones, and combinations of both. This was the most interesting and informative panel discussion ever experienced at a convention. Members of the audience participated and numberless questions were asked and answered. It was a veritable seminar and easily marked the high spot of the convention.

Better Materials Buying

Although most of the convention business program was devoted to the presentation and discussion of technical subjects, the managerial phases of photoengraving were not overlooked. An excellent presentation was made by Presi-

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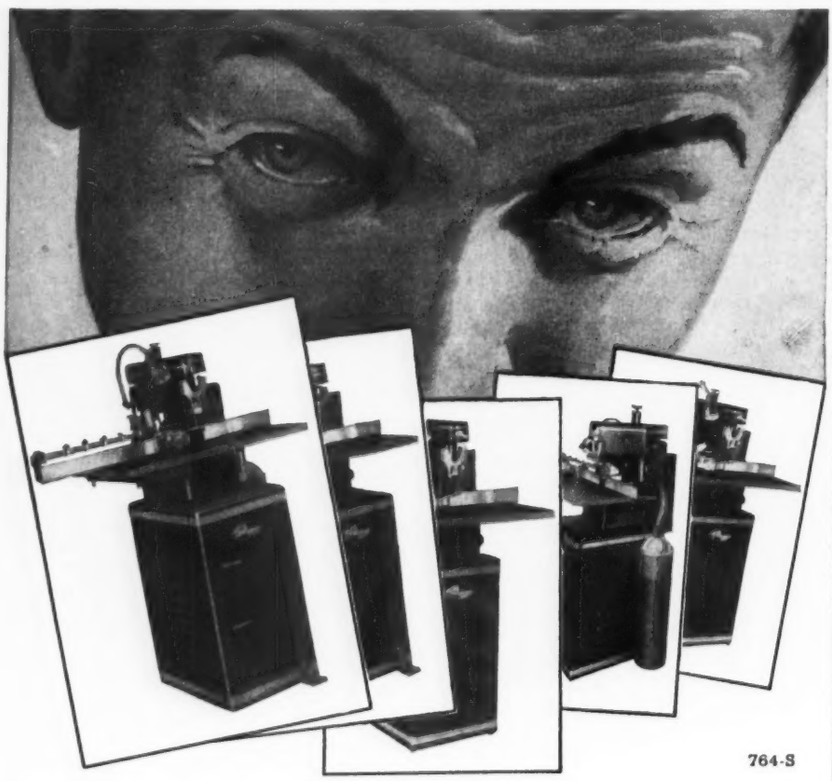
dent Paul F. Schmidt, Harold M. Pitman Co., Chicago, dealing with *Greater Profits Through Better Buying Habits*. The speaker had done considerable research on the subject and had carefully documented the statements contained in his remarks as to the buying habits of photoengravers and the savings that could be accomplished by purchasing materials and supplies regularly and in sufficient volume to cover a stated period. The difference in the prices quoted were in some instances astonishing.

Director Clarence A. Bostwick, of the Cost, Accounting and Statistical Department, American Photoengravers Assoc., Chicago, spoke on *Cost Accounting and Charge For What You Do*. His remarks were informative and enlightening, since they touched the very heart of all business, namely, the road that must be traveled to obtain profits. Without profit there can be no business and to obtain profit, costs must be known. Some of the figures quoted by him taken from records are provocative to say the least.

Line of Communications in the Plant

President E. M. Gherman, E. H. Gherman & Co., Chicago, dealt with the subject of personnel relations entitled, *You Can Listen For One Minute and Fifty Seconds—Then What?* The matter of personnel relations is important in all human endeavors and particularly in operations as technical as the different phases of photoengraving, in which men are trained as specialists in one particular branch, their combined efforts producing the finished product. Being a made-to-order business, the opportunities for misunderstandings are great and, generally speaking, although a very close personal and friendly relationship between employers and employees has prevailed, there is room for improvement in specific instances. The problem has been as to what the American Photoengravers Assoc. can do to implement a movement that will result in improved personnel relations. Doctor Gherman expressed his views with some apt demonstrations that seemed to indicate the problem was largely an individual one and would no doubt be handled differently by those who have to deal with it.



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New President Addresses Convention

The relationship between employers in the photoengraving industry and the Intl. Photoengravers Union have been friendly for many years. Interruptions, such as strikes and lockouts, have been exceedingly few and far between. It has long been customary for a representative of the American Association to address the annual convention of the Intl. Photoengravers Union and vice versa.

On this occasion and with the election of a new president, Wilfred T. Connell (after E. J. Volz' retirement) he addressed the members on the subject *Joint Problems Call For Joint Approach and Solution*. Connell made a favorable impression and presented his views and the views of the members of his organization clearly and in a pleasing manner. Undoubtedly the relationship that has prevailed for many years will continue under the guidance of President Connell.

Comprehensive Exhibits

Fifty-one concerns in the photoengravers' machinery, equipment and supplies field exhibited their wares and demonstrated their uses during the convention. The exhibition in the main displayed refinements and improvements of standard items. Among the distinctly new and novel inventions and developments were the following:

Magnesium Press Plate—Complete magnesium press plate curved for rotary press use, printing direct from plate to paper from the original plate, a procedure that will have a considerable impact upon edition printing. Presented by the Magplate Corporation, Detroit.

ColorTran Converter (newly developed) *Developers* substitute the incandescent lamp for the arc lamps generally used. These are claimed to be a better light source, easier to operate, and more economical. These were shown by the Natural Lighting Corp., Glendale, Calif.

New Uses for Screen and Other Tints—Bourges, Inc., New York, demonstrated new uses for its screen and other tints in the creation of color plates from mono-

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tone copy, these being a business builder for photoengravers and letterpress printers.

An *Automatic Darkroom Camera* by Consolidated Photoengravers' and Lithographers' Equipment Co., Chicago. In this camera are carried three rolls of film, each a different size, and every movement can be operated and controlled from either the darkroom or the copyboard section. It's a push-button affair throughout. Also a new development of the Engravaplate machine which now engraves line plates by electronic means, the first time this has been achieved.

Dow Process Etching Machine—Master Etching Machine Co., Philadelphia, displayed the etching machine designed to utilize the Dow powderless etching process.

Klimsch Camera — Klimsch & Co., Frankfort, Germany, exhibited its camera. Its mechanical construction is designed to fit every requirement in the production of color process plates. It is completely automatic, all moving parts being motor-driven.

Variomat Camera Attachment — Philip Lochman & Co., Chicago, exhibited the Variomat, a device that can be attached to a conventional camera which achieves results heretofore considered impossible. It enables the reproduction of color process plates from proofs of same size, enlargements or reductions without any moiré effect whatever. It can be used to distort copy, vertically or horizontally. It can change solid lettering into outline, condense or expand, etc.

Chemco Products—Chemco Photoproducts Co., Inc., New York, exhibited its latest darkroom camera and other equipment, including the etching machine designed for the Dow powderless etching process.

Engraved Cylinders and Microscope—Unitronics, Inc., St. Louis, displayed photoengraved cylinders and a high-power microscope designed for use on plates and/or cylinders. This magnifies to a degree to reveal all the characteristics of printing plates. It is calibrated with extreme accuracy to establish plate depths beyond dispute.

Eastman Products—Eastman Kodak Co. displayed many of its products, calling particular attention to its Magenta Contact Screens for photoengraving. These are now available in three screen rulings —60, 120, and 133 lines per in. The screens are provided in a variety of sizes. The Magenta Screen has been used successfully by offset platemakers and is destined to find its place in photoengraving.

ITCA Meeting

(Continued from Page 36)

chances of losing a lot of money, but that they can make it pay if they stick to it. He showed the audience a job of phototypography consisting of 137 units of printed cards about 12 in. by 6 in. size, the composition for which represented 18 hrs. of keyboard time printed by offset, which would have required 2800 lbs. of type metal to produce if done from hot metal by letterpress. The 137 units pasted on a continuous sheet of kraft paper required six men to unfold and stretch across the front of the 60 ft. wide room, and about 60 more ft. eastward. He declared that such work made possible by phototypography opened up "huge avenues leading to new production, not competitive with the hot metal business of a trade plant." He also showed actual specimens of composition in various shapes including backslant, forward slant, compressed and expanded characters, also outlined, solid and shaded, in italics and Roman types.

What We Do with Fotosetter

C. J. Caswell, Peoria, Ill., spoke on *What We Do with Our Fotosetter*, mentioning that he entered the phototypographic phase of his trade typographic business 17 months ago, after having established a good clientele over a period of years in regular advertising and trade work. His plant with an investment of about $200 thousand required about $36 thousand additional investment for the new department. With techniques adopted and adapted from others who had previously worked out phototypesetting operations, he was able to avoid much money loss, and is currently profiting from the ven-

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Ink Etched Transparent Proofs One Side Only Require No Dusting — At the recent convention of the Intl. Typographic Composition Assoc., in Chicago, Vandercook & Sons, Inc., welcomed those attending the convention to that company's new factory. A number of new developments were exhibited and demonstrated. Among the demonstrations was a new Vandercook method for pulling transparent proofs. For this purpose, the operator used a new power driven test press (shown above) which is now in production. The press is equipped with a special drawsheet blanket 0.020 in. thick together with a special ink possessing etching qualities. The proofs are pulled on one side of the acetate sheet and require no dusting.

ture. He held up to view of the audience, pictures of one film of a letter which had been blown up from 10 pt. to 43 times its original size, and another picture of a matrix character increased 160 times its original size without loss of legibility or symmetry. He reported that the use of the Intertype Fotosetter machine opened new outlets for his production service including TV stations, advertising agencies and other users.

Other Machines Discussed

At the same session, other machines and a camera utilized in producing phototypography were described by three speakers as follows: *The Monophoto Machine* by George E. Nelson, Philadelphia; *The Linofilm and the Photon*, by Frank M. Sherman, and *The Fotomaster Camera*, by Joseph L. Baarlaer, Cincinnati.

Tells the Truth Without Bragging

At the Friday forenoon session, John A. Scott, operating a corporation under his name in Dallas, told how the firm increased its billings in 10 years to more than $1 million annually. He referred to producing modifications of cameral work to any size or shape wanted, without regard to matrices, fonts, point size, or mechanical limitations, and to make type, artwork, trade marks, or photographs fit exactly and desired perspective. He enumerated and described variations from regular type formations and got a laugh when he said that "Texans have learned that even if they tell the truth they are accused of bragging." His firm has published a coated paper catalog, 56 pages and cover, (oblong) 11 in. by 8½ in. page size, showing specimens of its typographic work and giving a lot of information to users of the firm's service.

Form Phototypesetting Group

At a post-convention meeting, interested men who utilize phototypographic facilities discussed the need for effecting a trade group affiliated with ITCA to arrange for a glossary of terms, trade customs as applied to the new development, possible group advertising, exchange of individual advertising, and policies with reference to disputes among international unions concerning jurisdiction of workers. Several committees were authorized to be appointed.

Middleton Speaks

One of the speakers at the opening session of the convention was Dr. R. Hunter Middleton, Ludlow Typograph Co., art director and type designer, who talked on *Type was Made to Speak*. He showed reproductions of advertisements from newspapers and magazines, also from mailing pieces as examples of good typography with speaking atmosphere. He indicated that typographic art can be utilized to make speaking qualities of type effective in selling the products and services of advertisers, and urged more attention on the part of typographers to this "speaking" idea.

Plant Visits

Many ITCA members from out of town took advantage of the Ludlow Typographic Co. invitation to visit the headquarters of the firm and see the exhibits shown there. Thursday afternoon of the convention period was set apart by the convention planners for a mass visit to the new factory of Vandercook & Sons, Inc., 3601 W. Touhy Ave.

Officers Chosen

Officers elected at the 35th annual meeting of the International Typographic Composition Assn., LaSalle Hotel, Chicago, Sept. 22-25 follow:

President Harold L. McGirr, New York, N. Y.; First Vice Pres. Harold R. Dantuma, Chicago; Second Vice Pres. Joseph L. Baarlaer, Cincinnati; Treasurer John W. Shields, Bridgeport, Conn.

Regional Vice Presidents — Northeastern, Frank Lightbown, Boston; Mid-Atlantic, Donald M. Canfield, Utica,

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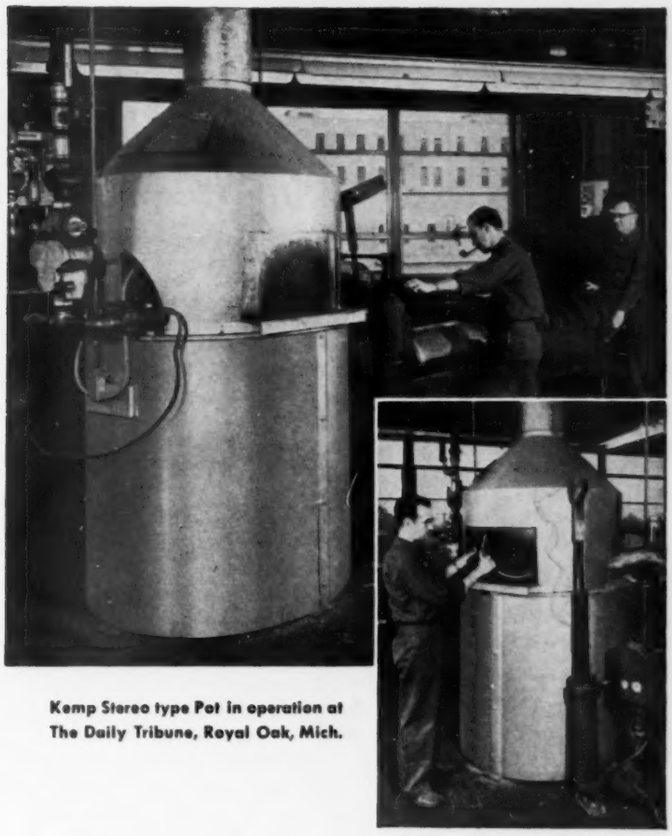
for dependable operation



Kemp Stereo type Pot in operation at The Daily Tribune, Royal Oak, Mich.

No pot breakage, less dross formation with Kemp equipment

Its stereo pot is a vital part of the Royal Oak, Michigan, Daily Tribune's operation. To minimize the danger of a costly breakdown, the Tribune chose a Kemp Stereo Pot.

Kemp has justified its purchase at the Tribune. Danger of pot breakage has practically been eliminated; dross formation has been reduced. And in addition, Kemp immersion heating units eliminate inefficient external burners—assure high melting rates, rapid temperature recovery after adding cold material, and save up to 40% on fuel. No wonder the Tribune, like all other Kemp users, is pleased with Kemp performance!

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Table-Model Magazine Racks

A Foster Exclusive

Now you can store additional magazines without utilizing valuable floor space. Racks are drilled ready to lock on top of table, galley or any cabinet under 40″ high.

Models for Both Linotype and Intertype Magazines Priced LOW

LINOTYPE MAGAZINE MODELS		
#310—Stores 12 full	Overall 33″w x 22″d x 33″h	$98
#312—Stores 7 full	Overall 20½″w x 22″d x 18″h	89
#314—Stores 12 splits	Overall 33″w x 22″d x 33″h	89
#316—Stores 7 splits	Overall 20½″w x 22″d x 18″h	84
INTERTYPE MAGAZINE MODELS		
#410—Stores 12 full	Overall 33″w x 22″d x 33″h	$104
#412—Stores 7 full	Overall 20½″w x 22″d x 18″h	95
#414—Stores 12 splits	Overall 33″w x 22″d x 33″h	92
#416—Stores 7 splits	Overall 20½″w x 22″d x 18″h	87

SPECIAL—*Galley Cabinet as Pictured*

4-Tier 6¼ x 23½ Capacity for 80 Galleys
Cabinet is 31″ high x 33″ wide x 25″ deep — $69

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See Below for Work Top Prices

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18¼″ x 23½″	$163	$119	$ 78
15″ x 23½″	142	93	66
12¼″ x 23½″	119	85	59
10½″ x 23½″	104	78	52
8½″ x 23½″	88	54	39
6¼″ x 23½″	69	50	36
14 x 20	116	72	50
12 x 18	78	49	35
10 x 16	73	45	34
8¼″ x 13″	55	40	28

Work Tops for Galley Cabinets

A 4 Work Top (Fits 4-Tier 8¼″ x 13″) — $59
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15% DISCOUNT WHEN ORDERED WITH CABINET

SILVER KING

Rust-Resistant Galleys

Guaranteed Not to Rust for 10 Years
Precision Construction with Glass-Smooth Finish

Size	Silver King Gal.	Regular Steel Gal.	Size	Silver King Gal.	Regular Steel Gal.
18¼ x 23½	$2.16	$1.66	6¼ x 23½	$ .83	$ .71
15 x 23½	1.77	1.42	14 x 20	1.39	1.03
12¼ x 23½	1.54	1.14	12 x 18	.96	.82
10½ x 23½	1.35	1.01	10 x 16	.79	.71
8½ x 23½	.89	.78	8¼ x 13	.66	.50

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N. Y.; Southeastern, N. C. Jamison, Memphis, Tenn.; Southwestern, Sam Findley, Fort Worth, Tex.; Midwestern, Oscar Hoffman, St. Louis, Mo.; Pacific Coast, Robert W. Willison, Los Angeles; Canadian, Walter R. Adamson, Toronto (Ont.), Can.

Members of Executive Committee, (three years)—George Ferguson, Denver, Colo.; William C. Stremie, Philadelphia; C. J. Caswell, Peoria, Ill.; Fred Laille, Newark, N. Y.; Leo Johnson, St. Louis, Mo.; Richard Hellman, Chicago.

Bar Plate Process

(Continued from Page 32)

to 60 Rockwell C. For long runs and for cutting of tough material the hardness of rule should lean toward the upper limits. It is sometimes necessary, in order to arrive at a sharp bend, for the die-maker to use a softer rule, accomplish his bends, and then have the material heat treated. Care must always be used in the selection of the proper hardness of cutting rule otherwise poor results will be obtained not only in the die but also in the work being cut. Direction of rule is important, too. In box work this mainly runs perpendicular, parallel, and diagonal. In other diecutting industries, of course, it will run the entire range. On flatbed cylinder presses, rules running perpendicular to the cylinder normally require less makeready than those running parallel. From this we can see that those running the gamut between perpendicular and parallel will call for a variation of makeready.

Die Density

The density of the die must also be considered. Density of the die is the number of linear inches of steel rule per square inch of die. This determines the amount of pressure exerted in pounds per square inch on the jacket. The denser the die the greater the pressure exerted. Denser dies are those that are used in cutting egg boxes, chick shipping containers, small tooth paste cartons, individual lipstick cartons, etc.

From this discussion it is evident there are many variables entering into the cutting and creasing operation, all leading to a climax of the die contacting the jacket. Everything in the cutting and creasing operation is geared to obtain this result and nothing takes as severe a test as the cutting and creasing jacket.

Here in this article we have only touched upon the variable factors simply because each factor is a research project in itself. The foregoing is meant to point up the fact that no one steel jacket will satisfy all conditions in cutting and creasing. The variables are in the steel make-up and design of the jacket. For occasional diecutting in printing plants the shirttail type jacket is recommended (Fig. 5). This type jacket is meant for a non-converted press and involves no alteration to the press. On the guide end, the jacket fits over the tympan pins, and on the rear end, it fastens around the reel. Since it involves no alterations to the press, it is extremely flexible. The changeover time is a matter of minutes. The standard shirttail jacket, widely used in the Graphic Arts field wherever diecutting is needed, whether on a single or two-color press, supplements or replaces the need for a separate cutter and creaser. These jackets are a particularly handy piece of equipment for the smaller plant to have available, for their use gives maximum press utility and, in effect, converts the press into a cutter and creaser with the added advantages of selective printing or cutting and creasing with a single press. The shirttail jacket is provided with a shirttail of strong fabric having superior tear and oil resistance, more resistance to stretch and distortion, greater flexibility and longer, useful life. With this type jacket the undercut of the cylinder and height of cutting must be considered. In all cases standard bed bearers is assumed. The shirttail jacket (Fig. 5) is designed to give maximum thickness, hardness, and tautness consistent with the undercut, height of cutting rule used, and diameter of the cylinder, but only to a

Certificate of Appreciation Presentation—Frank F. Pfeiffer, executive vice president and general manager of Reynolds and Reynolds Co., and first president of the Research and Engineering Council, was presented with a Certificate of Appreciation by the Research and Engineering Council of the Graphic Arts Industry, Inc., at the Annual Meeting of the Printing Industry Assoc., Dayton, O., Sept. 17. J. Homer Winkler, technical advisor, Battelle Memorial Institute, and secretary of the Research and Engineering Council, made the presentation for the Council. The Annual Meeting of the Printing Industry Assoc. was the occasion for a joint meeting with the Craftsmen's Club. Presentation of the certificate was in recognition of Pfeiffer's bringing about coordination of Graphic Arts research through organization of the Council of which Pfeiffer was first president. Council membership is now comprised of 63 associations, 224 companies, and leading engineers and technicians.

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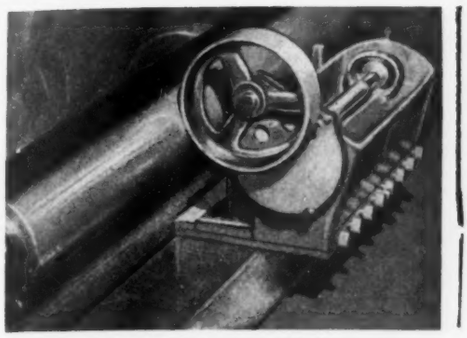

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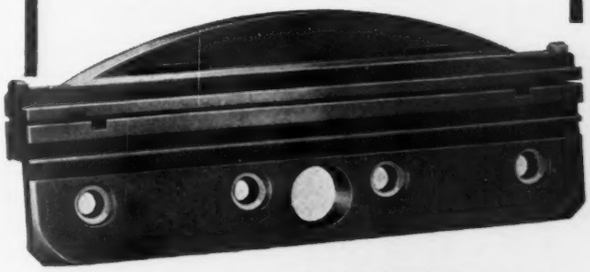
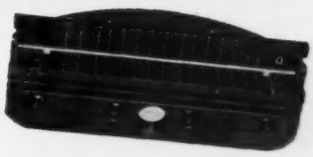


Above: Regular Universal Adjustable mold.

Right: New Star body ribbed mold.



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point beyond which a turnbuckle jacket must be used. (Fig. 3 is a typical turnbuckle jacket as produced by The Bar-Plate Mfg. Co.) (Fig. 4 is a typical installation made with this jacket.)

For the larger non-converted presses the turnbuckle jacket will run in thicknesses from 0.045 in. to 0.062 in., with a hardness of 32-36 Rockwell C and with a high modulus of elasticity than is normally found in the thicker cutting and creasing jackets. Except for the lesser thickness and the higher modulus of elasticity the turnbuckle jacket is equal to the regular cutter and creaser and in versatility surpasses it. For work involving odd numbers of printing 1, 3, 5, etc. on two-color presses, the boxmaker jacket is unsurpassed. For example, on a print-cut job with a single color printing run on a two-color press, the electros of the first bed can be registered to the die of the second bed with a minimum amount of preparation. This results in a great savings of both downtime and labor, not only in the pressroom, but also in the die and makeup department. Quick drying inks and the use of "emeryed" cork in many cases eliminates any problem of smudging or picking, and thereby greatly increases the scope of work a print-cut system can handle. Concerning the use of a printing press for cutting and creasing, the following is a statement by the plant manager of one of the larger box plants:

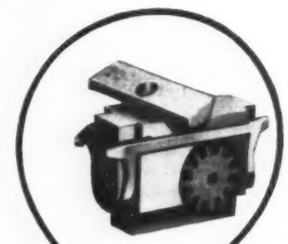
"It is the writer's opinion that the creasing operation in box work is one of a male and female (punch and die) proposition where the creasing rule does not touch the cylinder or jacket. With the cutting rules, however, we must analyze separately the effects of the rule running parallel to the cylinder and those running perpendicular thereto. The rules running perpendicular to the cylinder have a shearing action, with considerably less pressure exerted per square inch of cutting rule than there will be by the equivalent printing rule. The cutting rule running parallel to the cylinder will exert pressures per square inch equal to, if not less than, the equivalent printing rule. The characteristic noises of the cutting and creasing operation are primarily that of cutting rule steel meeting jacket steel and should not be associated with impact, as with proper make-ready there will be no impact by a kiss contact. As a rule, I have found when a company converts a printer to a cutter and creaser the printer is well worn from the printing operation and perhaps is out of register. The assumption being that the cutting and creasing operation is a vigorous one, and therefore, a good printer should not be converted. This assumption is unwarranted for we have obtained excellent results with your Bar-Plate Boxmaker Jacket, *i.e.*, the quality of the printing being unaffected by cutting and creasing on the same press and vice versa."

The turnbuckle jacket for non-converted presses is also manufactured with a swivel bar. Currently, this is only manufactured for single color presses. The bar setup is such that head knives, if desired, can be eliminated. The jacket can be swiveled back as on a regular cutter and creaser. Since there are no bends in the jacket the possibility of an incipient crack is reduced considerably. (In Fig. 6 is illustrated a turnbuckle jacket for the Miehle 7/0 74 in. between-bearers non-converted press.)

For folding carton companies using 0.937 in. rule, the cylinder is normally undercut 0.112 in. The jackets for these presses are 0.083 in. thick. The type of bar and the methods of fastening the jacket to the bars will vary depending upon the conversions. The conversions for cutting corrugated call for either a greater undercut or lower bed bearers to accommodate a jacket thickness of 0.125 in. The reason for the increased thickness in the jacket is to compensate for the thicker rules used in cutting corrugated and the course makeready used in that industry. Jackets 0.085 in. thick in this application do not have a sufficient amount of backing to ward off the impact from 6 pt. rule. Bars on cutting and creasing jackets serve to bind the jacket to the bar, to permit the jacket to swivel, to allow for a rigid surface for pulling the jacket taut to the cylinder, and to allow for a solid backing at that portion above the beginning of the cylinder. Care must be taken in riveting to avoid marring the cutting surface of the jacket. After the rivets are set properly, the jacket is removed and taken to the grinding department for finishing.

For the cutting and creasing operation, machinery varies with the type of job; each has its own features that make it adaptable for certain type work.

The platen press is the elementary form of cutter and creaser. It is supplied with the regular shell movement with two flat surfaces, a movable platen, and a stationary bed. The jacket normally 1/16 in., 1/8 in., or 3/16 in. is fastened in the corners to the platen by four flathead machine screws (Fig. 7). The platen is drilled and tapped while the jacket is drilled and countersunk to receive these screws. The makeready is placed underneath the jacket. The die



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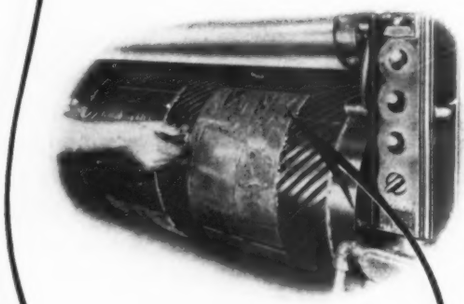
The hook *is* the thing—the heart of the PMC Warnock Plate Mounting System for all rotary letterpresses. It is safe, speedy, accurate and dependable. Safe because the hook locks *automatically* in the cylinder groove when inserted and can't fly out to damage plates or press. Speedy because hooks can be moved rapidly in cylinder grooves. Accurate because the hooks can be moved minute distances for close register adjustment. Dependable because sound engineering and careful manufacturing control make both hooks and cylinders precision mechanisms of proven efficiency.



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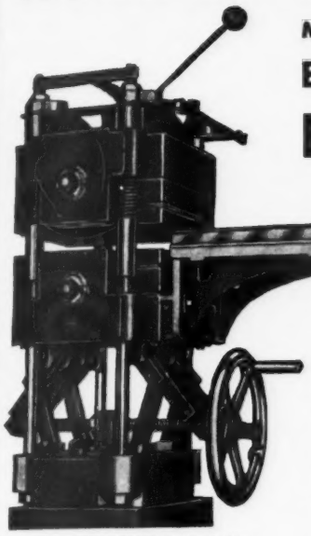

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1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.
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• PLATENS 11"x13"
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is locked in the bed of the press. The bed carries the sheet to the die and, there, contact is made simultaneously. The pressure needed to accomplish the cutting and creasing is rather high inasmuch as the contact of all the rule occurs at one time. The smaller platen cutting and creasing press can be obtained with automatic feed and delivery. The maximum size for automatic feed is basically 14 in. by 22 in. although the Thomson-National Press Co. makes one slightly larger. Beyond this size all cutters and creasers are basically hand fed and are available in sizes to 38 in. by 54 in. In work that involves thick material or material that cannot be automatically fed this type press is extremely valuable. The primary manufacturers in the United States of this type press are Thomson-National Press Co., Chandler & Price Co., and Brantjen & Kluge.

Fig. 10.

For the smaller platen presses such as Chandler and Price, Kluge and Heidelberg there are special jackets that clip quickly over the platen and do not necessitate fastening by four flathead machine screws. In Fig. 8 the Bar-Plate Clicker Jacket for Chandler and Price, and Kluge Presses is shown. In Fig. 9 the Bar-Plate Reversible Heidelberg Jacket is illustrated.

Another type of press is the flatbed cylinder cutter and creaser. In Figs. 9, 10, and 11 are shown a 70 in. Cutting and Creasing Jacket as manufactured by The Bar-Plate Mfg. Co. The jacket is first formed (Fig. 10), then drilled and countersunk (Fig. 11) and finally attached to bars (Fig. 12). Except for the few single-revolution cutting and creasing presses found in corrugated plants, these presses are primarily two-revolution. In the United States these presses are manufactured by Miehle Printing Press & Mfg. Co. and Miller Printing Machinery Co., and run in sizes from 29 in. to 80 in. between bearers. With this type press in contrast to the platen type cutter and creaser the action is that of shearing because all action of die and jacket is point contact. However, less pressure is needed in cutting perpendicular to the cylinder than in cutting horizontal to it.

Converting Flatbed Presses

Flatbed cylinder printing presses can be converted to cutting and creasing presses. Conversion of these presses is done by various large shops throughout the country with a varying degree of success. Here the cylinder is undercut sufficiently to accommodate 0.083 in. jacket or a 1/8 in. jacket depending upon the application. In some cases, in order to handle higher cutting rule the bed bearer is reduced from 0.918 in. to as low as 0.888 in. Most jackets for regular and converted cutting and creasing presses are reversible, containing identical bars on each side. Other conversions involve a single bar on the guide end with holes on the rear end to receive some form of turnbuckle setup. In several isolated cases conversions have been made with the jacket screwed directly to the cylinder and with the turnbuckle on the rear end pulling the jacket taut to the cylinder. This type conversion is undesirable inasmuch as time of lifting the jacket is great and at the point of fastening the opportunity for a rupture is greatly increased. The bars and the methods of fastening will vary depending upon who does the conversion.

Temporary Press Conversion

In non-converted printing presses used for cutting and creasing, we find a situ-

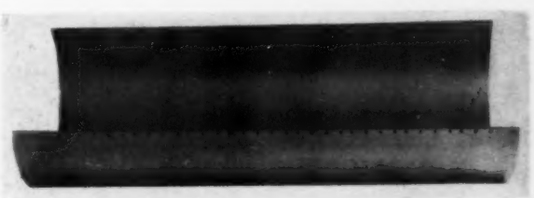

Fig. 11.

ation where a single or multi-color printer is temporarily converted to a regular cutter and creaser, allowing the advantage of additional cutting and creasing facilities without additional capital expenditure. Three style jackets are manufactured for these presses: (1) Shirttail type jacket that fastens around the second reel (Fig. 5), (2) a turnbuckle jacket that is pulled taut by means of a turnbuckle setup, and (3) a turnbuckle jacket with a swivel bar. Also available for non-converted presses are special purpose jackets.

The reciprocal head cutter and creaser is a relatively new device for which many applications are being found. In this country, this type of press is manufactured by Champlain, Mercury and Sheridan, with a maximum size of 40 in. by 80 in. Like the platen cutter and creaser, the reciprocal head cutter and creaser is equipped with a hardened steel plate, normally 1/8 in. or 3/16 in. thick. The speed of the larger presses is comparatively low because extreme pressures are needed for cutting and creasing. Therefore, these mechanical presses are of a greater weight. In the smaller sizes, speeds in the neighborhood of 4000 i.p.h. are available in either sheet fed or web fed setups.

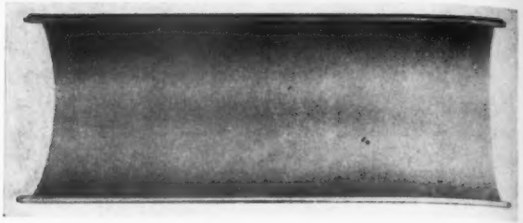

Fig. 12.

The Rotary Press

The fourth and final type to be considered is the rotary press of which the speeds and sheet sizes are extremely high. The pressures exerted by the cutting and creasing rule against the jacket are extremely low. The biggest impediment in the evolution of cutting and creasing in the direction of rotary cutting and creasing is the high cost of the die. The writer is sure that if the cost of producing dies for this type of press can be reduced, the direction in cutting and creasing would proceed quickly to this pattern. Presses such as Miehle, Babcock, Harris, Cottrell, etc., could be quickly utilized.

The cutting and creasing operation in boxboard, paper, corrugated, etc., has always been one of interest. This has been the case not only with the men in the field but also with men in allied and foreign fields. In many cases it is hard for the latter to conceive so inexpensive a die performing multiple functions such as cutting, creasing, perforating, and cut scoring, all in one operation, with one pass through the machine, automatically fed and delivered. Not one die but 2, 10, 50, and even 100 ganged up, producing in an hour anywhere from 1000 to 100,000 of an individual item.

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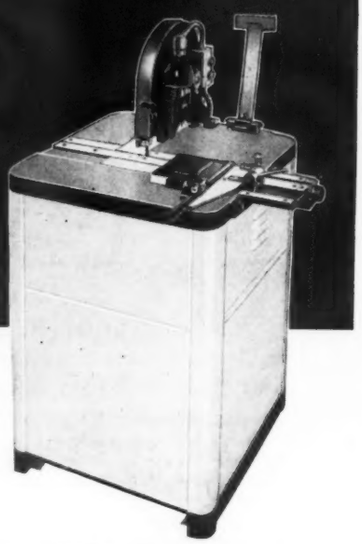
With Exclusive Automatic Feed

For Photoengravers, Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

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2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

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H. B. ROUSE & COMPANY

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ROUSE PRODUCTS...The Standard of the World Since 1899

Equipment & Supplies

(Continued from Page 28)

duty steel with two straight and two ball bearing plastic casters. Measurements are 14 in. wide by 20 in. long by 23 in. high. For further details mention numbers as follows: No. 324 for paper chuck; No. 325 for plate and type metal truck, and No. 326 for Margach pig truck.

Lithographic Makeready Tissue

Peter J. Schweitzer, Inc., has announced development of three thicknesses of makeready tissue for use on offset presses. To be known as Tru-Cal Makeready Tissue, it is available in thicknesses of 0.001 in., 0.0015 in. and 0.002 in. All thicknesses are provided in roll form. Rolls are on a 3 in. core with an overall diameter of approx. 8 in. The rolls in caliper 0.001 in. contain 3000 lineal ft.; in caliper 0.0015 in. contain 2000 linealft.; and in caliper 0.002 in. contain 1500 lineal ft. Regular stock roll widths are from 34 in. to 55 in. Weight of the rolls are 1¼ lbs. per in. of width. For additional information, please ask for PEE No. 249 in your request.

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Magic Matrix Black

The new patented cold chemical process for contrasting line casting matrices, Ludlow, Fotosetter, etc. Fotomat contrasting is safe and easy.

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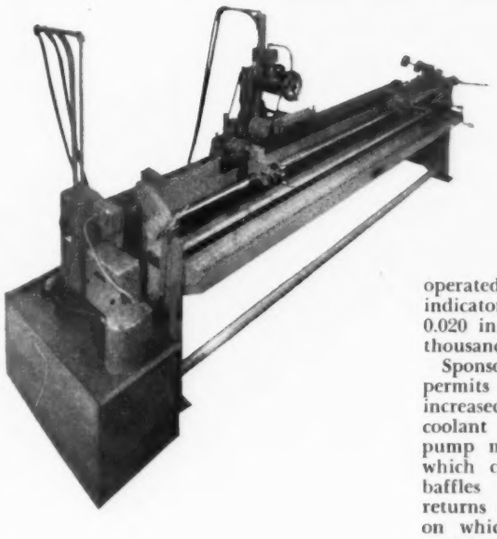


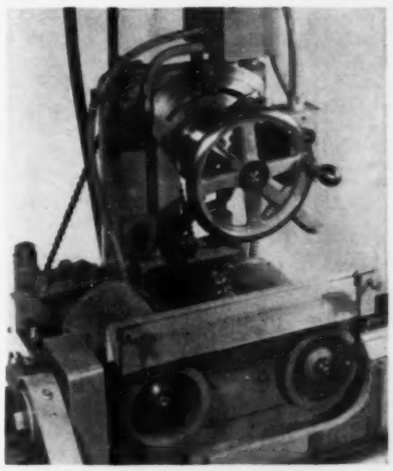
View of Standard Process Co.'s wet grinder for grinding gravure doctor blades. The coolant is circulated by centrifugal pump.

Gravure Doctor Blade Grinder

On the Standard Process Corp.'s Dual Head Gravure Doctor Blade Grinder, grinding is done with the aid of a coolant to eliminate blade burning. With cooperation of The Carborundum Co., it has been determined that two stones will complete the grinding and finishing of a doctor blade for press operation. Two grinder stone heads are mounted on a common carriage; one is used for grinding and the other for finishing. Either can be controlled manually or automatically through individual clutches operated by a hand lever. Automatic feed indicator is calibrated from 0 in. to 0.020 in.; hand feed is calibrated in one-thousandths from 0 in. to 0.100 in.

Sponsor also states a coolant system permits the carriage traverse speed to be increased from 6 to 30 ft. per min. The coolant is circulated by a centrifugal pump mounted on a 38 gal. reservoir, which contains necessary screening and baffles for conditioning solution as it returns to tank. The hand scraped ways, on which the carriage travels, are protected by replaceable Swedish high carbon, blue-tempered steel wear strips and are continually lubricated during operation by use of oil cups and wipers.

A doctor blade with its holder is mounted on two adjustable clamps; then is swung so that the edge of the blade rests, under pressure, on a ground backup anvil, thus simulating press operating conditions. Blade can be ground to any desired bevel from 90 deg. to 10 deg. by turning a crank. All operating controls are mounted on the front of the machine. Motors are provided with overload protection and machine is completely wired. For further details, please mention PEE No. 342 in your request.



Close-up view of Standard Process Co.'s Gravure Doctor Blade Grinder. The two heads are mounted on a common carriage. Either cup wheel (one for grinding and one for finishing) can be controlled manually or automatically. Automatic feed is calibrated from 0 in. to 0.020 in.

G-E Variators Bulletin

The new G-E "B" case Speed Variator power unit, a packaged, all electric adjustable voltage d.c. drive operating from a.c. power, 15 h.p. to 30 h.p., is described in a bulletin announced by the General Electric Co. The publication provides information on design and operating features, ratings and dimensions. Please mention PEE No. 347 when requesting a copy.

BOOTH'S ZINK CUT CEMENT

BEST for mounting cuts and solidifying type elements for standing ads. It mounts cuts quickly and holds them tighter. Used in printing plants all over the country. Get your order in now for a supply necessary for your needs.

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Monsanto Booklet

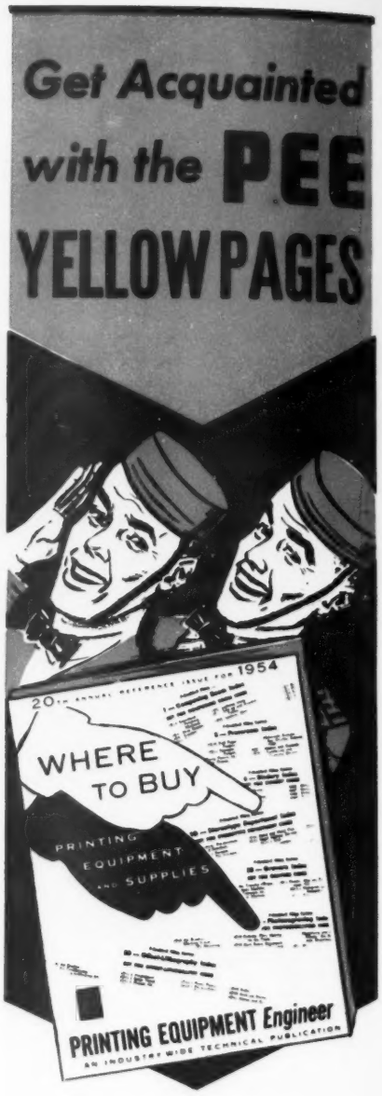
Vuepak, Monsanto Chemical Co.'s transparent cellulose acetate packaging material, is the subject of an illustrated booklet by officials of the firm's Plastics Div. In the booklet are described various fabricating techniques, including vacuum forming, cutting, folding, creasing, sealing, beading and drawing, and physical characteristics. A section is devoted to the use of Vuepak in such non-packaging applications as protective sleeves for business papers, wallet inserts, file tabs and laminated displays. Printing and decorating processes discussed include silk screening, letterpress, dry offset and aniline printing, gravure, lithography and collotype. A list of suppliers also is included. Please request PEE No. 254 when writing for additional information.

Motor Control Center — General Electric Co. has designed a motor control center which it claims will save up to 50% in floor space. To be known as DA7093, the control center will accommodate nine NEMA Size One starter units, or six NEMA Size Two units in the standard 90 in. trough. The starter units may be of either the fusible or circuit breaker types. The control center has a center busing arrangement which, according to G-E, frees pull-box space for wiring and increases vertical bus capacity from 300 amps to 600 amps. A separate insulator is furnished for each bus. Split Type B terminal blocks permit starter units to be removed or inserted without disturbing established wiring. Push buttons are mounted on the unit door, and when pressed, actuate the contacts by means of plunger-type extensions. Cadmium-plated gliders ground the unit to the cadmium-plated base upon which it rides. Grounding occurs before the unit engages the bus bars. Starter units are inserted and withdrawn from the center in a drawer-like operation by means of an L-shaped handle. The operating handle may be padlocked in either the on or off position. For further details, please mention PEE No. 272 in your request.

Oscillating Roller for Multiliths

An all-metal oscillating-action heavy-duty rider roller for 1200 Series Multilith presses has been announced by Litho Engineering & Research. Called the Hefty-Roller, sponsor claims it will effect an improvement in presswork, especially noticeable on difficult half-tones, heavy solids, color work, etc.

The oscillating action of the roller helps produce a continuous, micrometrically equalized flow of ink to the top form roller which prevents horizontal streaking, ghosting and similar symptoms of inadequate inking, the manufacturer states. The all-brass roller weighs 2 lbs. It is claimed the added weight aids in working the ink, breaks down pigments and provides better control, brilliance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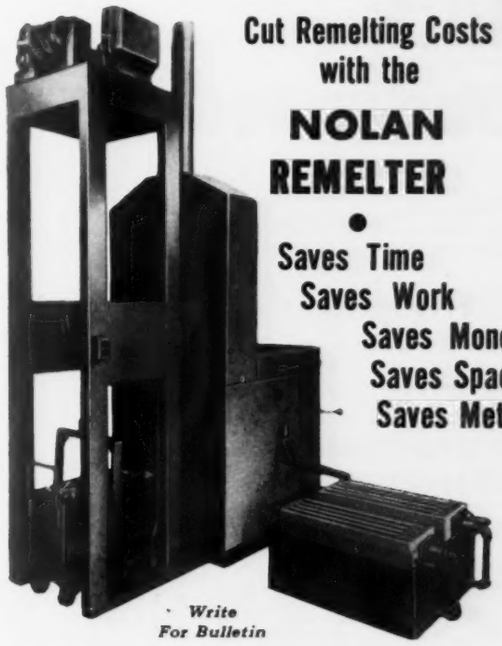

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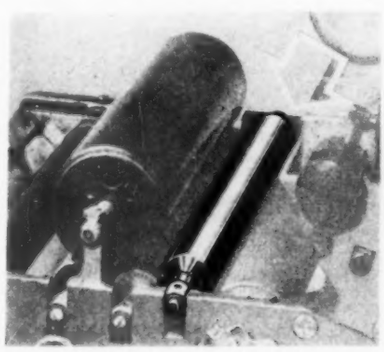
and sparkle, increased depth and intensity of coverage in solid areas.

Other claims made for the roller are that it prevents uneven inking or skip-



ping, stays in contact with the large ink roller, and will not wobble, sag, pit, swell or get out of round. It is also available with 1/16 in. hard rubber covered cylinder. Further information is available by requesting PEE No. 245.

Small Darkroom Camera

A 16 in. by 20 in. all-metal darkroom camera for use with small press operations has been announced by Robertson Photo-mechanix, Inc. To be known as the Robertson 320, it features a Vac-U-Flat vacuum film holder designed to securely hold all sizes of film and contact screens, standard and irregular, up to the full size of the camera.

The Xtra-Dimension copyboard is designed to hold copy of any thickness up to 1½ in. in focal plane. Sponsor claims it will accommodate copy of irregular thickness and contour such as text books, magazines, pencils, boxes, etc.

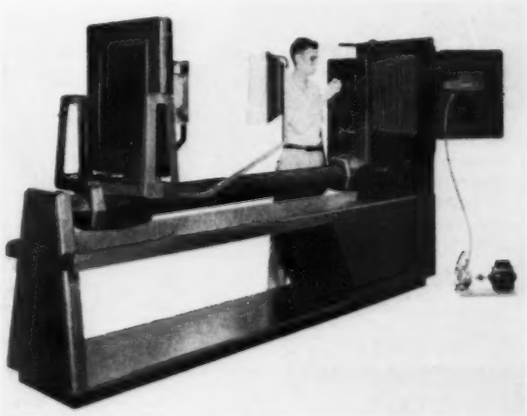
Another feature is the Percentage focusing scales. An electric pushbutton timer automatically controls the shutter, exposure and lamps. Both the full sized ground glass with inch markings and vacuum film holder are mounted on separate swinging doors.

The camera is equipped with a 14 in. Goerz Red Dot Apochromatic Artar Lens which provides an enlargement range of 2X and a reduction range of 5X. The cabinet base in the gallery contains 28 cu. ft. of storage space.

The copyboard, which takes opaque artwork up to 21 in. by 25 in., is lighted by two 1500 w. incandescent lamps in specially designed reflectors on adjustable lamp arms and operated on standard 110 v., a.c. For additional details, please mention PEE No. 263 in your request.

Offset Press Blanket

The Mercury Blue Streak offset press blanket, developed by Rapid Roller Co., is designed especially for use when printing with quick drying and heat set inks. Sponsor claims that characteristics in the compound from which the blanket's surface is made eliminate the problem of fast setting inks drying on the blanket. It is further claimed that these inks stay open on the Blue Streak blanket and embossing is eliminated. The company states the blanket provides improved reproduction of halftones and solids while



The Robertson 320 Darkroom Camera is designed for use with small press operations. A feature of the unit is the copyboard which will accommodate copy of irregular thickness and contour. It is manufactured by Robertson Photo-mechanix, Inc.

Tempo Black Condensed

Here is the latest addition to the growing Ludlow Tempo family. There are 16 roman and italic series now available in this most useful and popular typeface. Size range from 14 to 72 point inclusive.

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using less printing pressure. More details on this product may be secured by mentioning PEE No. 309 in your request.

Ideal's Roller Folder

A folder, *Guide to Good Rollers*, has been made available by Ideal Roller & Mfg. Co. In it are listed the various types of rollers which Ideal makes for the packaging and paper converting field. Please mention PEE No. 341 when requesting a copy.

Magnet's Ink Remover

Magnet Litho Supply Corp. announces Scata-Glaze, an inflammable solution for removing dried ink from rubber and metal rollers. It is also said to eliminate glaze and slime from treated surfaces. The producer asserts Scata-Glaze removes hardened ink from plates, cylinders, typewriter platens and press parts. For further details, please mention PEE No. 338 in your request.

Photosensitive, Anodized Aluminum Sheets

Photosensitive, anodized aluminum sheets designed for photographic reproduction by standard darkroom methods, has been announced by the Metalphoto Corporation. Known as Metalphoto, the aluminum sheets, which measure 0.020 in. in thickness, and which are available in sizes of 4 in. by 5 in., 8 in. by 10 in. and 10 in. by 12 in., may be used to produce such products as name plates, dial and watch faces, wiring diagrams, instructions, instrument and slide rule scales, and other products where resistance to abrasives is vital.

Photographs and drawings are processed from ordinary photographic negatives using darkroom techniques and standard solutions. The non-facing image is permanently sealed within the sapphire-

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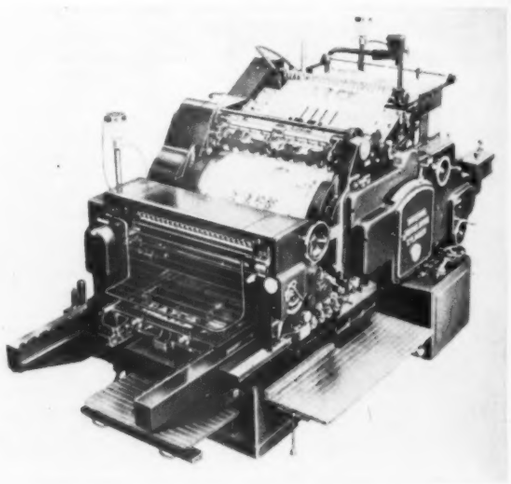
Heidelberg Cylinder Press — Heidelberg Eastern, Inc., Heidelberg Southern Sales Co. and Heidelberg Western Sales Co. have jointly made a pre-announcement of the Original Heidelberg cylinder press designed to accommodate a max. sheet size of 21 in. by 28 in. It is planned by the three American distributors to hold open houses and exhibits in the near future to show the features of the single color, one revolution press. Additional personnel and floor space are to be added to the Heidelberg facilities in this country to handle installlations, parts and service of the cylinder press. If additional information is desired, please mention PEE No. 274 in your letter of inquiry.



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Apply giving full details of education, experience and salary desired. All replies strictly confidential. Our own employees know of this opening. Box PE 1627, 221 W. 41st St., NYC.

GRAVURE INK TECHNICIAN

to formulate inks and service gravure printers for well-established firm with headquarters in the East. Excellent opportunity for the present and for future advancement. Should have good personality for contact work as well as good technical ability.

Reply giving full details of education, exp. and both personal and business references. Our own employees have been advised of this advertisement. Box No. 518, NYC.

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3 Scott 4 page width Jones Tension Stands. Excellent condition. Reply Box 517.

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For sale! Rebuilts $10. Rentals $2.50 a week. Repairs $3.

Atlas Numbering Mach.
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What Have You Developed?

From time to time, mechanical and production executive readers have developed devices to speed production or improve machine operation. Many of these have appeared in *Printing Equipment Engineer*. If you have devised something of this kind, our readers will appreciate knowing about it. Just write informally to Editor, *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

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Patented
for all types of printing machinery
THE DOYLE VACUUM SHEET CLEANER
Patented
Removes dirt, dust, lint and dry spray from paper while printing
The J. E. Doyle Co., 1220 West 6th St., Cleveland 13, Ohio

hard anodized layer. Sponsor claims this layer protects the dimensionally stable image from abrasion, temperatures up to 1000 deg. F., and acids, salts and organic solvents.

The company states the 50 million pores in each square inch of the anodized layer make possible almost limitless detail in the legend to be reproduced. Plates may be immersed in various dye solutions to produce color effects. Please request PEE No. 246 if further details are desired.

Gray Contact Screens

Announcement of the development of a range of neutral gray contact screens for photolithographic and photoengraving use has been made by Seymour Schwartz, Pres., S. Schwartz & Associates. The screens are available, Schwartz states, in 55, 65, 85, 100, 120, 133 and 150 rulings per in. and in sizes up to 30 in. by 40 in. Ordinary electric light bulbs are used. Filters, enlargement and reproduction processing, plus screen-distance problems are claimed to be eliminated. It is further stated that tone reproduction characteristics are built into these contact screens through the character of the vignette dots. Further information may be obtained by requesting PEE No. 241.

Wrapping, Bundling Bulletin

Wrapping and bundling operations utilize a variety of transparent films, specialty papers, and foils applied by many types of machines. The average packager will welcome the pictures and information contained in the recently issued Paisley Technical Service Bulletin No. 25. A description of adhesives available for these operations is included in the bulletin. A copy may be obtained by requesting PEE No. 236.

Its Industry-wide Engraving Promotion — "The Lord helps those who help themselves" is demonstrated emphatically in the series of folders planned and produced by the Southwestern Photoengravers Assoc. through Executive Secretary Virginia Nichols. The front pages are shown above in miniature. Originally, the association produced the series of 12 folders (one to be mailed each month) in limited numbers for its own member use. However, photoengraving firms in other parts of the United States enthusiastically approved the idea and demanded quantities for their own use. For the 1954 monthly mailing, the Southwestern Association, in response to the demand, designed and printed 12 thousand sets of brochures (144 thousand single brochures) and sold them to engraving firms in 52 cities in 24 states and in Canada. Mrs. Nichols reports that a fine reception was accorded the idea by advertisers, advertising agencies and letterpress printers.

Now, a new series of brochures has been prepared for 1955 monthly mailings by photoengraving firms. The first series was devoted to the style and techniques of photoengraving. It has been announced that the second (1955) series has been designed as a selling medium. However, it appears that not only does the series carry selling weight, but it also consists of a series of examples as to what can be done by photoengraving techniques.

Subjects of the new series are: (1) Size; (2) Contrast; (3) Color; (4) Step and Repeat; (5) Versatility; (6) Detail; (7) Brilliance; (8) Texture; (9) Layouts; (10) House Magazines; (11) Newspapers — this one printed on newsprint; (12) Special Effects — this brochure printed on rough stock, showing line from halftone, three color line, poster, square screen, etc.

These brochures (except Nos. 11 and 12) are printed on white enamel stock, black and color, size approx. 8½ in. by 11 in.; minimum order, 50 sets; each brochure bears the sender company's firm name imprinted in black, and inserted with cardboard stiffener in a large white mailing envelope on which your company's return address has been imprinted.

For further information and prices, write Mrs. Virginia Nichols, Executive Secretary, Southwestern Photoengravers Assoc., 3621 Country Club Circle, Fort Worth 9, Tex.

ADVERTISERS' INDEX
NOVEMBER 1954

P. E. E. REPRESENTATIVES

WILLIAM L. OSBORN, Eastern Advertising Representative, 1712 Grand Central Terminal, New York 7, N. Y. Phone MUrray Hill 6-5980.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Advertising Representative, 1276 West Third St., Cleveland 13, Ohio. Phone PRospect 1-0088

Alan Wood Steel Co 44
Alico, Incorporated 8
American Evatype Corp 30
American Publishers Supply, Inc 53
American Type Founders, Inc 12, 13, 17, 18
Atlantic Zinc Works 47

Baum, Russell Ernest 16
Beveridge Paper Co., New Products Div 30
Bingham's, Sam'l, Son Mfg. Co 21
Blackenite Products Co 14, 20, 24, 29
Booth, E. A., Rubber Co 62
Burgess Cellulose Co 10

Capital Tool & Mfg. Co 57
Certified Dry Mat Corp 20
Challenge Machinery Co., The 52
Chandler & Price Co 48
Clarity Company, The 61
Clark Equipment Co 19
Cline Electric Mfg. Co 65
Craftsmen Machinery Co 46
Cutler-Hammer, Inc 26, 27

Dexter Folder Co 6, 7
Doyle, The J. E., Co 65
Dutro, Orville, & Son, Inc 64

Eastern Newspaper Supply, Inc 45
Economy Engineering Co 24
Electric Eye Equipment Co 15

Federated Metals Div., American Smelting & Refining Co 40
Fisk 62
Foster Mfg. Co 56

General Electric Co 22, 23
Goss Printing Press Co., The 11
Graphic Arts Machinery, Inc 14

Hammond Machinery Builders, Inc ..... Inside back cover, 42
Heidelberg Automatic Presses 9

Imperial Type Metal Co 43, 55
International Newspaper Supply Corp 64
Intertype Corporation ..... Outside back cover

Kemp, The C. M., Mfg. Co 55
Korthe Engineering Co 14

Lanston Monotype Corp 41
Linotype Parts Co., Inc ..... Inside front cover, 57
Ludlow Typograph Co 64

Magnacraft Mfg. Co 51
Main, Chas. T., Inc 65
Matrix Contrast Corp 30
Mergenthaler Linotype Co 39
Midwest Stereotype Supply Co 64
Miller Printing Machinery Co 25
Morrison Company, The 3

New England Newspaper Supply Co 57
Nolan Corporation 63

Offen, B., & Co 65

Printing Equipment Engineer 8, 54, 62
Printing Machinery Co., The 58

Richards, J. A., Co 50
Rouse, H. B., & Co 60

Scott, Walter, & Co., Inc 2
Sta-Hi Corporation 1
Standard Process Corp 63
Star Cement Co 65
Statikil, Div. of The J. E. Doyle Co 51
Surface Combustion Corp 24

Tingue, Brown & Co 28
Type & Press of Illinois, Inc 64

Vandercook & Sons, Inc 8

Western Printing Machinery Co 20
Wood Flong Corp 61
Wood Newspaper Machinery Corp 4

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TRIMOSAWS

Glider
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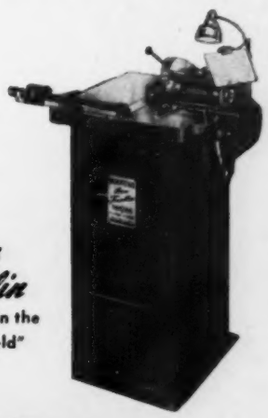

Ben Franklin
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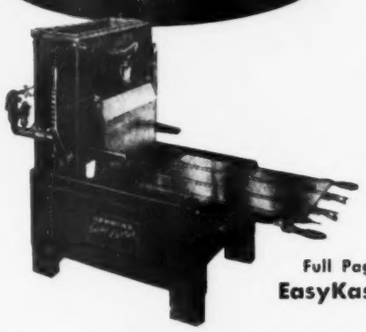
EasyKasters



Full Page
EasyKaster

5 and 6 Column
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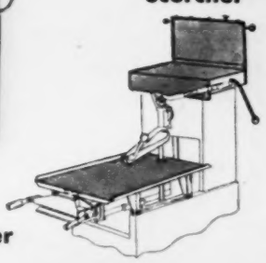
Pig Molder

Scorchers

EasyKaster
Scorcher



Full-Page
Scorcher

Routers

Radial Router

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Full Page
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Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

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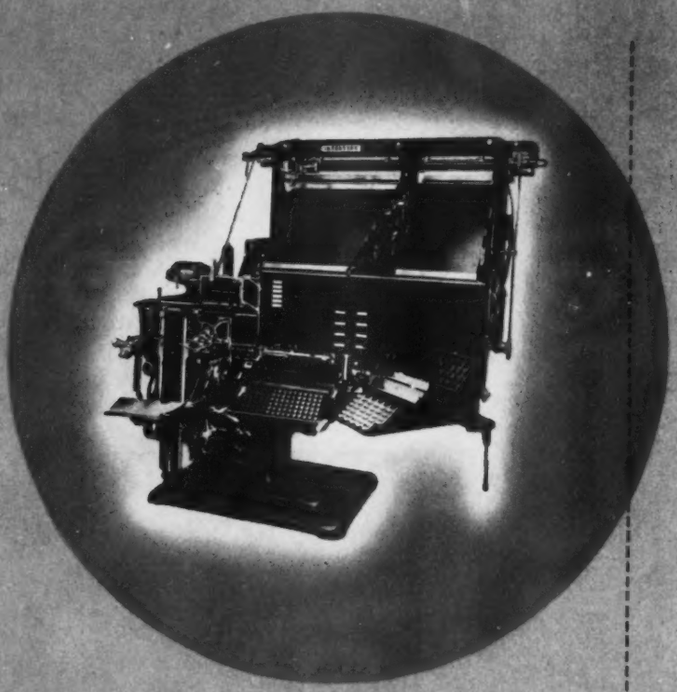

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